Who's in the room?

- **Please introduce yourselves in the chat window—**
- **Name, location, and….**
  - Number of years teaching ECS?
  - New to CS Teaching?
  - Teach/taught other subjects? Science? Math?
  - Are there particular Unit 1 or Unit 2 items you would like to see discussed?
  - Anything else you'd like to share ☺

SRI International

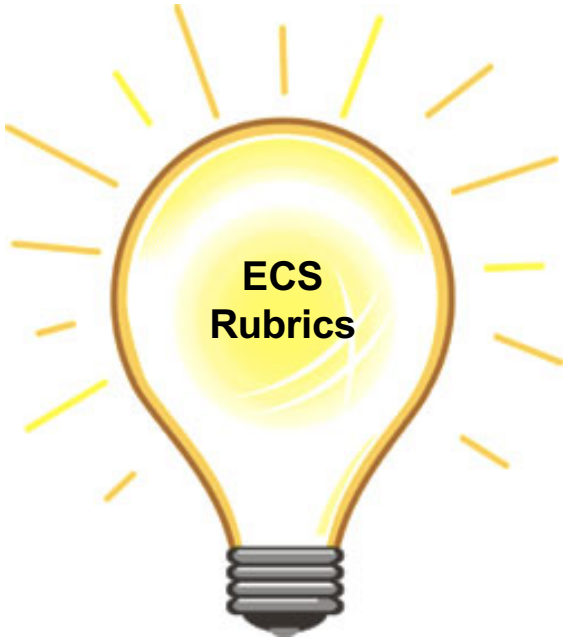
Center for Technology in Learning

SRI Education

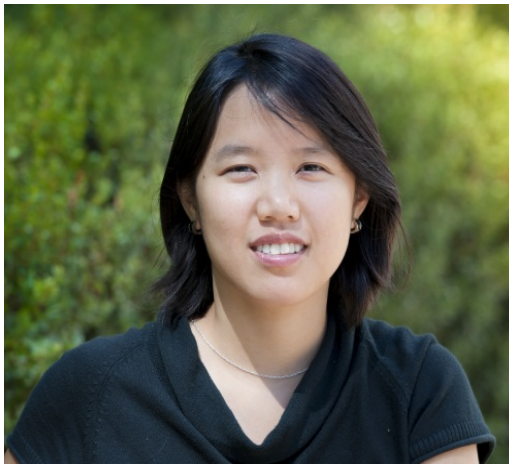
Principled Assessment of Computational Thinking

January 17th, 2017

Exploring Computer Science



Daisy Rutstein



Michelle Huynh

Agenda

- Overview of the rubrics
- Updates on Unit 1
- Updates on Unit 2
  - Unit 2, Item 5 + Discussion
- Updates on Unit 3
  - Unit 3, Item 2 + Discussion
  - Unit 3, Item 4 + Discussion
  - Unit 3, item 5 + Discussion
- Questions

ECS Assessments:

- 5 Sets: End-of-Unit (1-4) & Cumulative
- Aligned to ECS Curriculum; CSTA Standards
- Provide evidence of students' "Knowledge Skills and Attributes" (KSAs)
- Focused on Computational Thinking ***Practices***

Assessment in the **service of learning** (NOT accountability), that provide teachers with the evidence they need to draw inferences of what students understand, know, and are able to do.

ECS Rubrics and Scoring Guides:

- Two main sections
  - Quick Scoring Guide
    - Overview of points
  - Detailed Scoring Guide
    - Further details on the points for each of the questions
    - Clarification notes
    - Example responses

Quick Scoring Guide

Quick Scoring Guide

Total points for Unit 1: **17 points**

Task #	Points	Rubric
Task 1: What is a Computer? Total points: **3 points** <u>Learning Objective</u> • Explain and give examples of the concepts of computer and computing.		
1a	1 point	Scored using responses from Task 1b and Task 1c. • 1 point if the responses from Task 1b and Task 1c support the selection in Task 1a.
1b	1 point	• 1 point for providing an appropriate explanation for the characteristic selected.
1c	1 point	• 1 point for selecting a characteristic that is *different* from Task 1b AND for providing an appropriate explanation for the characteristic selected.

Updates to Unit 1

- Assessment had minor changes from last year's version
  - Task 1 has minor formatting changes
  - Task 3 and 4 have minor wording changes
  - Task 5 was removed
  - Task 5/6 has a change in the picture (and resulting text)
- The rubric generally remained the same as last year's with some minor modifications

Updates to Unit 2

- Assessment had minor changes from last year's version
  - Task 1 has word changes
  - Task 3 has a slightly revised banner
  - Task 4, part c has word changes
  - Task 5 has a few differences
    - Part c moved to part b and modified
    - Part d removed
    - Part e (now part d) had formatting changes

Unit 2, Item 5

5. Stacy runs a food bank.

- The types of cans donated to the food bank are vegetables, fruits, meat, and soup.
- Volunteers put the cans randomly on the storage shelves, wherever they find space.
- Stacy packs the cans into many food boxes a week.
- Each box has the same number and types of canned food.
- It takes Stacy a long time to find the cans she needs from the shelves.

Stacy wants to create a method for organizing the cans on the shelves.

a) What problem does Stacy hope to solve by creating a method for organizing the cans on the shelves?

Unit 2, Item 5

In parts (b) and (c), you will create a step-by-step method that can be used to *systematically* organize the cans that are currently on the shelves.

b) List one piece of information you need to know to create your method.

c) Create a method for Stacy to systematically organize the cans that are currently on the shelves. List your method as a series of steps.

d) A new type of food—condensed milk—is found on the shelves. Does your method from part (c) still work?

☐ Yes

☐ No

If yes, explain how the method would work. If no, explain how to modify your method.

Detailed Scoring Guide: Unit 2, Item 5a

Rubric for Task 5a

Total points: **1 point**

- **1 point** for providing an appropriate statement of the problem, which includes:
  - The shelves are not organized.

    OR
  - It is difficult or takes a long time to find the correct cans or to pack the food boxes.
  - **Note:** The student does not receive the point for a statement that solves the problem or does not describe the problem.

Sample Responses:

She hopes to solve the problem of the amount of time she wastes by simply trying find food for each of the boxes because they are all disorganized. She hopes to find the food faster and know where they are.

She hopes to find a faster way of distributing the food cans onto the shelf's.

Detailed Scoring Guide: Unit 2, Item 5b

Rubric for Task 5b

Total points: **1 point**

- **1 point** for identifying at least one variable related to the problem.
  - Appropriate variables include:
    - Types or categories of cans
    - Number of types of cans
    - Number of cans
    - Number of shelves
    - Amount of space on the shelves

Sample Responses:

To create my method, I needed to know what types of cans are donated to the food bank in order to stack all of them in order from what what type of can it is.

To create a method, Stacy needs to know where the shelves are

Detailed Scoring Guide: Unit 2, Item 5c

Rubric for Task 5c

Total points: **2 points**

- **1 point** for including a step about grouping the cans by type (e.g., *"sort the cans by fruits, vegetables, meat, and soups"*).
  - If the student groups the cans by other characteristics (e.g., alphabetically), this is acceptable as long as it would allow the cans to be easily found. Sorting by color or size would not qualify.
- **1 point** for including a step about moving the cans into designated locations (i.e., space for each food category) on the shelves (e.g., *"put cans in their correct shelves"*).

Note: The student may meet both criteria in one step (e.g., *"sort each can on the shelf labeled for that type of food"*) and receive both points.

Note: If the student includes additional steps, these are not scored.

Sample Responses:

1. Get four shelves.
2. For each shelve, write the name vegetables, fruits, meat and soup.
3. Take a can one at a time and place it where it actually belongs.
4. Take a box at a time and place the same number of vegetables, fruits, meat and soup inside.

Detailed Scoring Guide: Unit 2, Item 5c

Sample Responses continued:

She can place all of the fruits in one shelve the soups in another shelve and the meats in another shelve. She needs to sort them out differently.

- Label each shelf with a type of food.
- Sort the food, so that each food is on the shelf with a label.

Vegetables should all be in one box. Same with fruits, meat, and soup.

Organize them by what they are. Volunteers should put them in order.

Detailed Scoring Guide: Unit 2, Item 5d

Rubric for Task 5d

Total points: **1 point**

- **1 point** for providing an appropriate explanation of how the method described in Task 5c would apply for the new type of food OR for providing an appropriate modification if the method described Task 5c would not apply for the new type of food.
  - The student selects "Yes" (or stating that the method would work) AND provides a description that makes it clear how the new type of food is sorted based on the method from Task 5c.

    OR
  - The student selects "No" (or stating that the method would not work) AND provides a description that makes it clear how to modify the method from Task 5c in order to add a new type of food.

Sample Responses:

☑ Yes
☐ No

It would work because these kinds of cans would just have to be placed on a different shelf from the others. It would just be a set itself on its own shelf.

Detailed Scoring Guide: Unit 2, Item 5d

Sample Responses continued:

☐ Yes

☑ No

My method would not work because there is no shelf for condensed milk, only for veggies, fruits, meats, and soups. Since, there is only one can of condensed milk, I would move some of the cans over, let's say the soup shelf, and add a label for the condensed milk and put the milk can there.

☐ Yes

☑ No

I did not include another group in my method. I only specified vegetables, fruits, meat and soup.

Updates to Unit 3

- Assessment had minor changes from last year's version
  - Item 1 (moved from Item 4) has the explanation removed
  - Item 2 has minor formatting changes
  - Item 5 has modifications in the HTML code presented, but the questions remained the same

Unit 3, Item 2

2. Zoe wants to make a fan club website for a local band. She wants the website to have information about the band as well as information about the fan club.

a) Zoe wants a list of 4 requirements to give to a web design team who will create her website. Zoe has provided the first requirement. List 3 more requirements to give to the web design team.

Be sure that each requirement describes **specific content** (**WHAT** information is provided) and **specific design** (**HOW** the information should look) for Zoe's website.

Requirement 1	A list of shows, including the date and place for each show, with past shows in gray and upcoming shows in green.
Requirement 2	
Requirement 3	
Requirement 4	

Unit 3, Item 2

b) Sketch out **1 page** of Zoe's website. Use **one** of the requirements you listed in part (a) in your sketch.

- In your sketch, include pictures and words to show the requirement.
- You may describe in words any formatting that is not clear from the picture.

Select the requirement chosen to be included in the sketch:

- ☐ Requirement 2
- ☐ Requirement 3
- ☐ Requirement 4

Detailed Scoring Guide: Unit 3, Item 2a

Rubric for Task 2a

Total points: **3 points**

- **1 point** for providing a requirement that describes specific content AND specific design elements for Requirement 2.
  - **Note:** The student may write the requirements in HTML and/or CSS to receive the point as long as both content and design elements are present.
  - **Examples of content elements:**
    - Band information (e.g., band name, band members' biographies)
    - Fan club information (e.g., list of fan club members, information to join)
    - Images relating to band or fan club (e.g., band group photos, fan profile pictures)
    - Widgets (e.g., music player, video player, chat box, social media streams, calendar)
    - Security features (e.g., login form, password, username)
  - **Examples of design elements:**
    - Color information (e.g., blue text, black background, green links)
    - Font information (e.g., bold text, heading 1 text, cursive font)
    - Formatting (e.g., lists, tables, centered text)
    - Layout components (e.g., title, heading, main content, banner, footer, left column, sections)
    - Positioning of content (e.g., in middle, at the top, centered, next to, in grids)
    - Indication that specific content would appear on its own web page

Detailed Scoring Guide: Unit 3, Item 2a

- **Examples of elements that may be content or design elements, depending on context:**
  - Images – If images are used to provide information about the band or fan club, they are content elements (e.g., images of album covers, pictures of band posters). If they are used for aesthetics or layout purposes, they are design elements (e.g., band logo as default user image, repeat images of music notes in the background).
  - Paragraphs – Paragraphs may be considered content elements if they are paired with a design element (e.g. *"The layout would include several paragraphs in the middle of the page"*). They may be considered design elements if they are paired with a content element (e.g. *"Paragraphs that describe the history of the band"*).
  - Menus or Navigation Bars – Features such as menus or navigation bars may be considered content elements if they are paired with a design element (e.g. *"A blue navigation bar at the top"*). They may be considered design elements if they are paired with a content element (e.g. *"Menu of the band's concert dates"*).
  - Navigation links – Navigation links may be considered content elements if they are paired with a design element (e.g., *"Include links at the top of the page.")* They may be considered a design element if they are paired with a content element (e.g., *"Include a link to a page about the history of the band.")*

- **1 point** for providing a requirement that describes specific content AND specific design elements for Requirement 3. See the rubric for Requirement 2 above for examples.
- **1 point** for providing a requirement that describes specific content AND specific design elements for Requirement 4. See the rubric for Requirement 2 above for examples.

Detailed Scoring Guide: Unit 3, Item 2a

Sample Responses:

Requirement 2	An about us page, where each band member has a profile so fans can find out more about the band members. A picture of each member should also be included. The band member's name should be in dark green, and the description in light gray
Requirement 3	A videos page, where users can watch videos of the band's performances. Above each video, it should have the title of the video in green and a short description in gray.
Requirement 4	A clean home page that makes it easy to navigate to other pages on the site. Links to other pages should have a gray background, with a green font.

Detailed Scoring Guide: Unit 3, Item 2a

Sample Responses:

Requirement 2	Name in big font
Requirement 3	Information about the band
Requirement 4	Menu that links to other pages on the website (internal navigation links)

Requirement 2	A different page for the band and a different page for the fan club.
Requirement 3	A picture gallery of the band and video clips of their performances
Requirement 4	A link that leads to another page that sells fan accessories one could wear. Clothing, collectables, etc. should each have their own page.

Detailed Scoring Guide: Unit 3, Item 2b

Rubric for Task 2b

Total points: **2 points**

- The selection of the requirement from Task 2a is not scored.
  - **Note:** If the student does not select a requirement to sketch, the student can only receive full credit (2 points) for the sketch if the sketch clearly shows both content AND design elements from a **single** requirement. The student cannot receive partial credit for having only a content element or a design element as it is not clear that the student is attempting to sketch one of the three requirements. See Sample Response 2 below for an example.
- **1 point** for including the content element of the requirement chosen from Task 2a in the sketch.
  - The content element shown in the sketch must clearly be the one described in the chosen requirement. If the student shows a different content element, the student does not receive the point.
  - If the chosen requirement from Task 2a describes a content element but not a design element, the student can still receive the point for clearly including the content element in the sketch.
  - **Note:** If the chosen requirement from Task 2a does not describe a content element (i.e., it was incorrect), the student does not receive this point.

Detailed Scoring Guide: Unit 3, Item 2b

- **1 point** for including the design element of the requirement chosen from Task 2a in the sketch.
  - The design element shown in the sketch must clearly be the one described in the chosen requirement. If the student shows a different design element, the student does not receive the point.
  - If the chosen requirement from Task 2a describes a design element but not a content element, the student can still receive the point for clearly including the design element in the sketch.
  - **Note:** If the chosen requirement from Task 2a does not describe a design element (i.e., it was incorrect), the student does not receive this point.
- **Note:** If the sketch is HTML code and shows both the content element and design element, the student may receive 2 points.

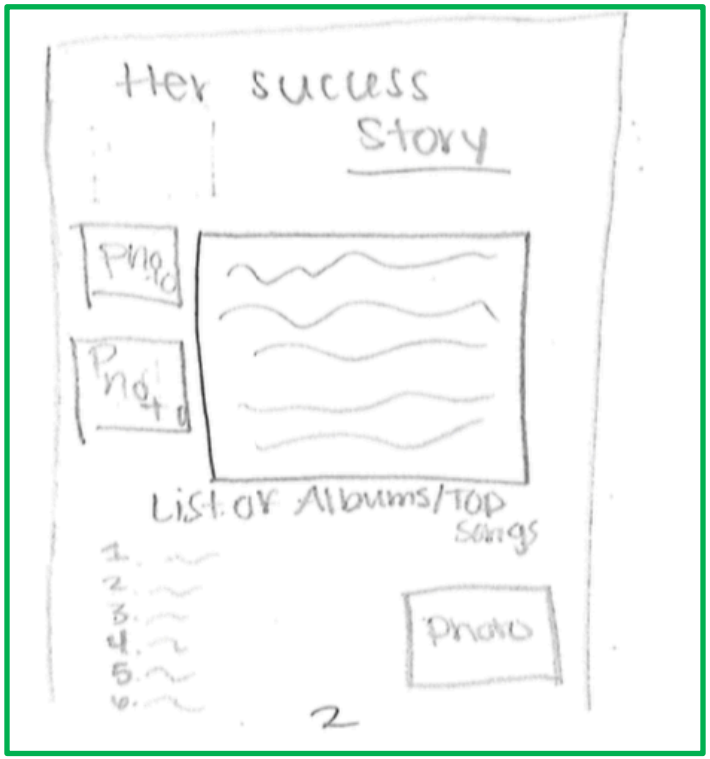
Detailed Scoring Guide: Unit 3, Item 2b

Sample Responses:

Requirement 2	Biography about the band with pictures next to it
Requirement 3	A list of albums/top songs
Requirement 4	The title at the top in big font and letters in orange

Task 2b:

- ☐ Requirement 2
- ☑ Requirement 3
- ☐ Requirement 4



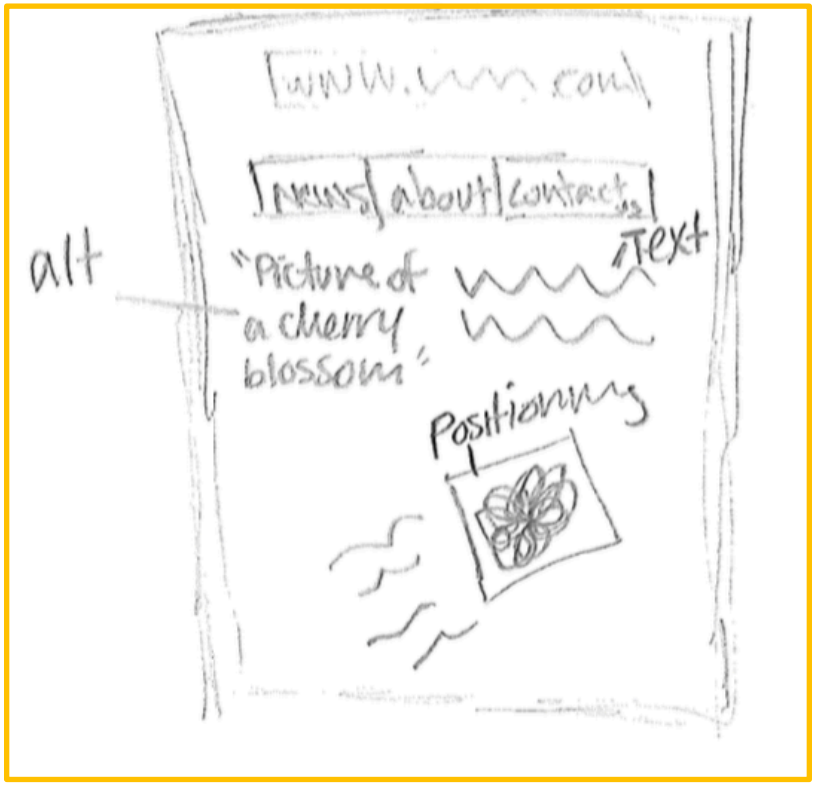
Detailed Scoring Guide: Unit 3, Item 2b

Sample Responses:

Requirement 2	Cool layout
Requirement 3	Music player with band's logo on it
Requirement 4	Short paragraph about the band

Task 2b:

- ☑ Requirement 2
- ☐ Requirement 3
- ☐ Requirement 4



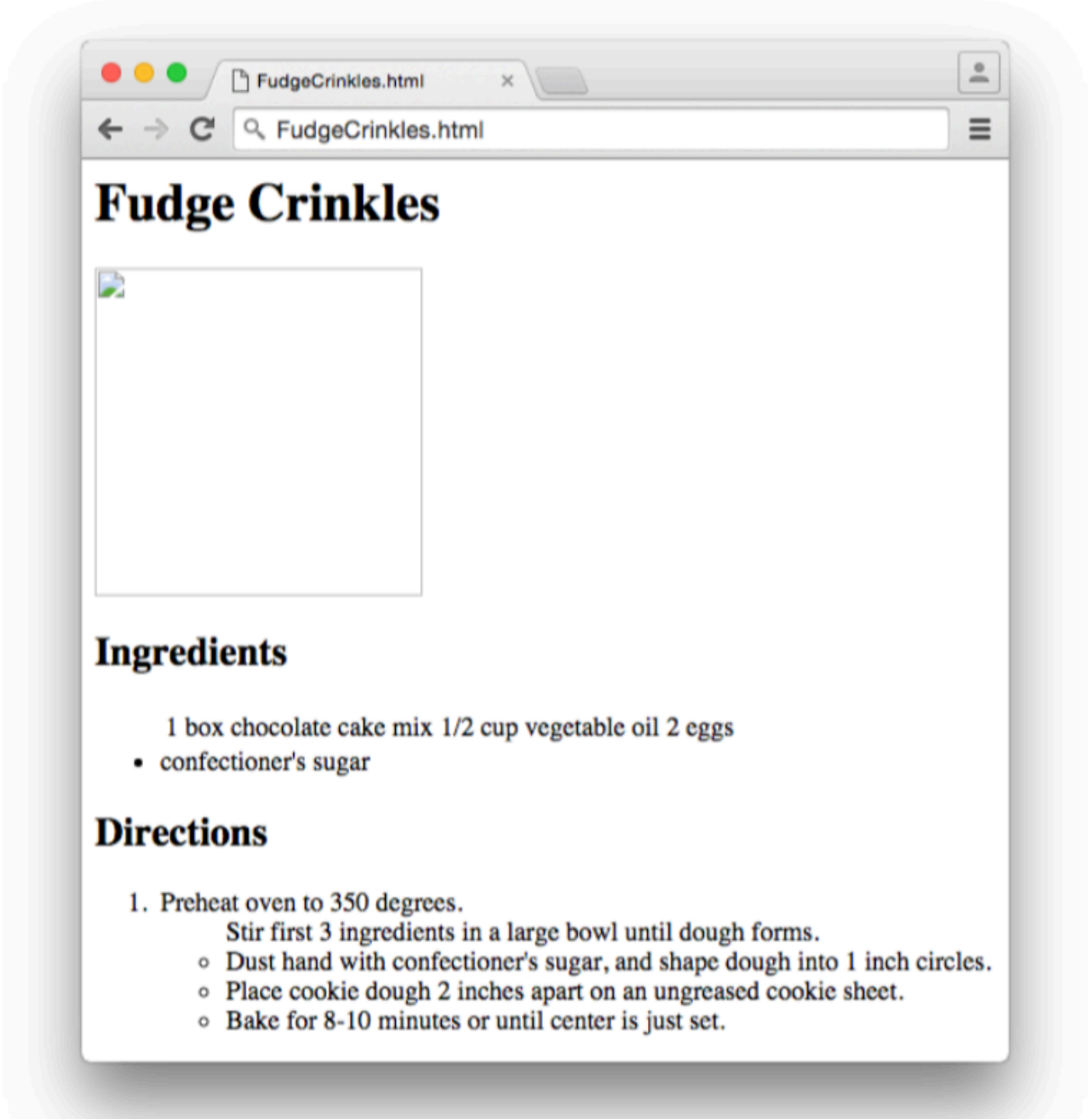
Unit 3, Item 4

4. **Felipe created a website to display his favorite cookie recipes. Each page on the website will contain a cookie recipe. Each page must have:**

    - The cookie name
    - A picture of the cookie
    - A heading for the ingredients along with a **bulleted list** of the ingredients
    - A **numbered list** of steps to make the cookies

Unit 3, Item 4

His first attempt at coding the web page for the Fudge Crinkles recipe resulted in this:



Unit 3, Item 4

a) Circle **one** error on the web page below. This will be **Error 1**.

Fudge Crinkles

Ingredients

1 box chocolate cake mix 1/2 cup vegetable oil 2 eggs

- confectioner's sugar

Directions

1. Preheat oven to 350 degrees.
   Stir first 3 ingredients in a large bowl until dough forms.
   - Dust hand with confectioner's sugar, and shape dough into 1 inch circles.
   - Place cookie dough 2 inches apart on an ungreased cookie sheet.
   - Bake for 8-10 minutes or until center is just set.

Explain why you think this is an error.

Unit 3, Item 4

b) Circle **one** error on the web page below that is **different** from part (a). This will be **Error 2**.

Fudge Crinkles

Ingredients

1 box chocolate cake mix 1/2 cup vegetable oil 2 eggs

- confectioner's sugar

Directions

1. Preheat oven to 350 degrees.
   Stir first 3 ingredients in a large bowl until dough forms.
   - Dust hand with confectioner's sugar, and shape dough into 1 inch circles.
   - Place cookie dough 2 inches apart on an ungreased cookie sheet.
   - Bake for 8-10 minutes or until center is just set.

Explain why you think this is an error.

Unit 3, Item 4

c) Circle the corresponding **Error 1** from part (a) on the HTML code below.

```
<html>
    <body>
        <h1>Fudge Crinkles</h1>
        <img src="FudgeCrinkles.html" width="200"/>
        <h2>Ingredients</h2>
        <ul>
            <table>
                <tr>
                    <td>1 box chocolate cake mix</td>
                    <td>1/2 cup vegetable oil</td>
                    <td>2 eggs</td>
                </tr>
            </table>
            <li>confectioner's sugar</li>
        </ul>
        <h2>Directions</h2>
        <ol>
            <li>Preheat oven to 350 degrees.</li>
            <ul>Stir first 3 ingredients in a large bowl until dough forms.</li>
            <li>Dust hand with confectioner's sugar, and shape dough into 1 inch circles.</li>
            <li>Place cookie dough 2 inches apart on an ungreased cookie sheet.</li>
            <li>Bake for 8-10 minutes or until center is just set.</li>
        </ol>
    </body>
</html>
```

Describe how you would fix the error in the code.

Unit 3, Item 4

d) Circle the corresponding **Error 2** from part (b) on the HTML code below.

```
<html>
    <body>
        <h1>Fudge Crinkles</h1>
        <img src="FudgeCrinkles.html" width="200"/>
        <h2>Ingredients</h2>
        <ul>
            <table>
                <tr>
                    <td>1 box chocolate cake mix</td>
                    <td>1/2 cup vegetable oil</td>
                    <td>2 eggs</td>
                </tr>
            </table>
            <li>confectioner's sugar</li>
        </ul>
        <h2>Directions</h2>
        <ol>
            <li>Preheat oven to 350 degrees.</li>
            <ul>Stir first 3 ingredients in a large bowl until dough forms.</li>
            <li>Dust hand with confectioner's sugar, and shape dough into 1 inch circles.</li>
            <li>Place cookie dough 2 inches apart on an ungreased cookie sheet.</li>
            <li>Bake for 8-10 minutes or until center is just set.</li>
        </ol>
    </body>
</html>
```

Describe how you would fix the error in the code.

Detailed Scoring Guide: Unit 3, Item 4a & 4b

Errors on Web Page

Use this key to score Tasks 4a and 4b. There are a total of 3 possible errors. Errors are in red rectangles below:

Fudge Crinkles

(1)

Ingredients

1 box chocolate cake mix 1/2 cup vegetable oil 2 eggs (2)

- confectioner's sugar

Directions

1. Preheat oven to 350 degrees.

(3)

Stir first 3 ingredients in a large bowl until dough forms.

- Dust hand with confectioner's sugar, and shape dough into 1 inch circles.
- Place cookie dough 2 inches apart on an ungreased cookie sheet.
- Bake for 8-10 minutes or until center is just set.

Detailed Scoring Guide: Unit 3, Item 4a & 4b

Rubric for Task 4a

Total points: **2 points**

- **1 point** for identifying an appropriate error on the web page (Error 1). See the *Errors on Web Page* section above for a key to possible errors.
  - **Note:** As long as the student circles part of the error AND does not include another error, the student may receive the point.
    - The student does not need to circle the complete error (i.e., from *"1 box chocolate…"* to *"…2 eggs,"* from *"Stir first 3…"* to *"…is just set"*) in order to receive the point.
    - The student may circle a section that is not an error (e.g., *"Ingredients,"* *"Directions"*) as long as the area circled contains part of an appropriate error AND does not include a different error.

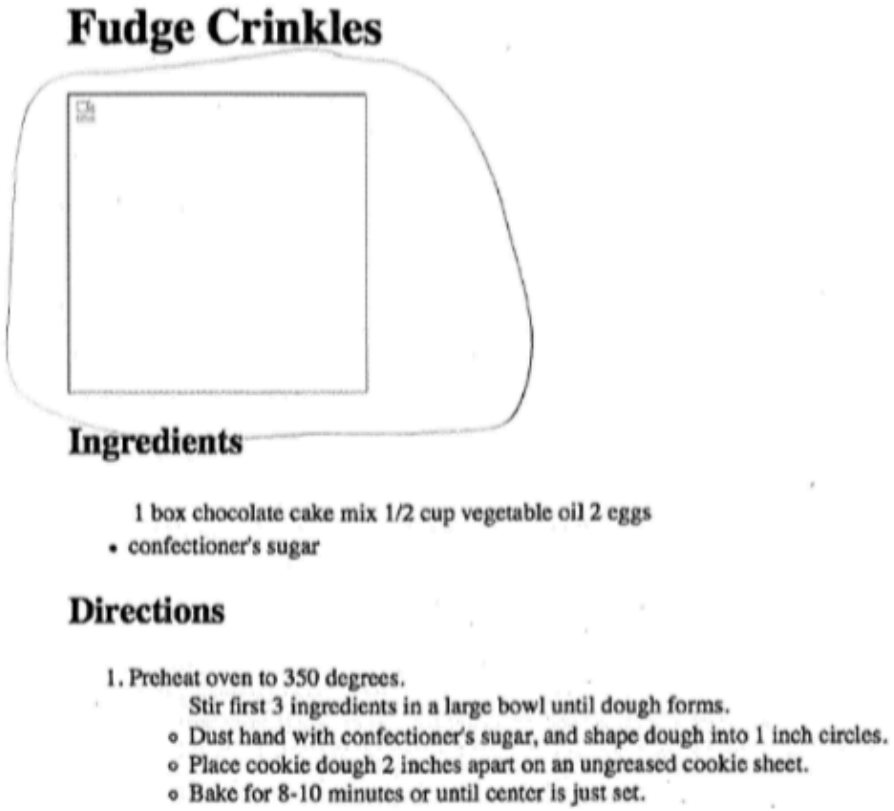
Detailed Scoring Guide: Unit 3, Item 4a & 4b

- **1 point** for providing an appropriate explanation for why the identified Error 1 is an error.
  - An appropriate explanation should be relevant to the identified error and should discuss how the error:
    - Does not meet the requirement for the part of the web page identified as an error.
      - **Note:** If the student identifies an incorrect requirement (e.g., the student states that the Directions list has an error because it is not a bulleted list instead of the error being that directions are not numbered), then the student does not receive the point.

      OR
    - Does not appear correct.
      - **Note:** If the student simply states that the error does appear correct without an indication of why that is the case (e.g., *"The ingredients don't look right," "The directions look weird"*), the student does not receive the point.
    - **Note:** If the student only indicates that there is an error in the HTML code without explaining what may be wrong with the HTML code, the student does not receive the point.
    - **Note:** If the student does not identify an error, the student may still receive the point for the explanation as long as the explanation makes it clear which error the student is discussing.

Detailed Scoring Guide: Unit 3, Item 4a & 4b

Sample Responses:



Fudge Crinkles

Ingredients

1 box chocolate cake mix 1/2 cup vegetable oil 2 eggs
- confectioner's sugar

Directions

1. Preheat oven to 350 degrees.
   Stir first 3 ingredients in a large bowl until dough forms.
   - Dust hand with confectioner's sugar, and shape dough into 1 inch circles.
   - Place cookie dough 2 inches apart on an ungreased cookie sheet.
   - Bake for 8-10 minutes or until center is just set.

The image was not called upon properly, and therefore does not show up. The syntax for calling an image was correct because the program knows there should be an image in that spot, but the name of the image file was not typed properly because it does not call any specific images.

Detailed Scoring Guide: Unit 3, Item 4a & 4b

Sample Responses:

Fudge Crinkles

Ingredients

no bullet

no bullet

no bullet

1 box chocolate cake mix 1/2 cup vegetable oil 2 eggs

- confectioner's sugar

Directions

1. Preheat oven to 350 degrees.
   Stir first 3 ingredients in a large bowl until dough forms.
   - Dust hand with confectioner's sugar, and shape dough into 1 inch circles.
   - Place cookie dough 2 inches apart on an ungreased cookie sheet.
   - Bake for 8-10 minutes or until center is just set.

I think this is an error because a bulleted list is supposed to have a bullet point at each item. In this section, 3 items that are supposed to be in a bulleted list are all on one line.

Detailed Scoring Guide: Unit 3, Item 4a & 4b

Sample Responses:

Fudge Crinkles

Ingredients

1 box chocolate cake mix 1/2 cup vegetable oil 2 eggs

- confectioner's sugar

Directions

1. Preheat oven to 350 degrees.
   Stir first 3 ingredients in a large bowl until dough forms.
   - Dust hand with confectioner's sugar, and shape dough into 1 inch circles.
   - Place cookie dough 2 inches apart on an ungreased cookie sheet.
   - Bake for 8-10 minutes or until center is just set.

Because for directions he still has bulleted list instead of numbered. He is suppose to use the <ol> tag.

Detailed Scoring Guide: Unit 3, Item 4a & 4b

Sample Responses:

Fudge Crinkles

Ingredients

1 box chocolate cake mix 1/2 cup vegetable oil 2 eggs

- confectioner's sugar

Directions

1. Preheat oven to 350 degrees.
   - Stir first 3 ingredients in a large bowl until dough forms.
   - Dust hand with confectioner's sugar, and shape dough into 1 inch circles.
   - Place cookie dough 2 inches apart on an ungreased cookie sheet.
   - Bake for 8-10 minutes or until center is just set.

This is an error because he did not put a bullet point for this ingredient. He could have used an ordered list.

Detailed Scoring Guide: Unit 3, Item 4a & 4b

Sample Responses:

Fudge Crinkles

Ingredients

- box chocolate cake mix 1/2 cup vegetable oil 2 eggs
- confectioner's sugar

Directions

1. Preheat oven to 350 degrees.
   - Stir first 3 ingredients in a large bowl until dough forms.
   - Dust hand with confectioner's sugar, and shape dough into 1 inch circles.
   - Place cookie dough 2 inches apart on an ungreased cookie sheet.
   - Bake for 8-10 minutes or until center is just set.

There are missing bullet points.

Detailed Scoring Guide: Unit 3, Item 4c & 4d

Errors in HTML Code

Use this key to score Tasks 4c and 4d. There are a total of 3 possible errors. Each number corresponds to the error number from the *Errors on Web Page* key above. Errors are in red rectangles below:

```
<html>
    <body>
        <h1>Fudge Crinkles</h1>
        <img src="FudgeCrinkles.html" width="200"/> (1)
        <h2>Ingredients</h2>
        <ul>
            <table>                                          (2)
                <tr>
                    <td>1 box chocolate cake mix</td>
                    <td>1/2 cup vegetable oil</td>
                    <td>2 eggs</td>
                </tr>
            </table>
            <li>confectioner's sugar</li>
        </ul>
        <h2>Directions</h2>
        <ol>
            <li>Preheat oven to 350 degrees.</li>
            <ul>Stir first 3 ingredients in a large bowl until dough forms.</li> (3)
            <li>Dust hand with confectioner's sugar, and shape dough into 1 inch circles.</li>
            <li>Place cookie dough 2 inches apart on an ungreased cookie sheet.</li>
            <li>Bake for 8-10 minutes or until center is just set.</li>
        </ol>
    </body>
</html>
```

Detailed Scoring Guide: Unit 3, Item 4c & 4d

Rubric for Task 4c

Total points: **2 points**

- **1 point** for identifying the code(s) associated with the student's Error 1 from Task 4a. See the *Errors in HTML Code* section above for a key to possible errors.
  - **Note:** As long as the student circles part of the error AND does not include another error, the student may receive the point.
    - The student does not need to circle the complete error (i.e., from "*<table>…*" to "*…</table>*") in order to receive the point.
    - The student may circle a section that is not an error (e.g., from "*<h2>Directions…*" to "*…
*") as long as the area circled contains part of an appropriate error AND does not include a different error.

Detailed Scoring Guide: Unit 3, Item 4c & 4d

- **1 point** for providing an appropriate solution for how to fix the error in the identified code.
  - **Note:** This point for the solution is based on what the student identified in the code on this page. If the student does not identify an error in the code, the student may still receive the point for the solution as long as it is clear which error the student is describing AND the error corresponds to Error 1 from Task 4a.
  - An appropriate solution for how to fix the error should be relevant to the identified error and should include:
    - The correct rewritten codes.

      OR
    - A step-by-step procedure on how to fix the error.

      OR
    - The codes to be replaced.

Detailed Scoring Guide: Unit 3, Item 4c & 4d

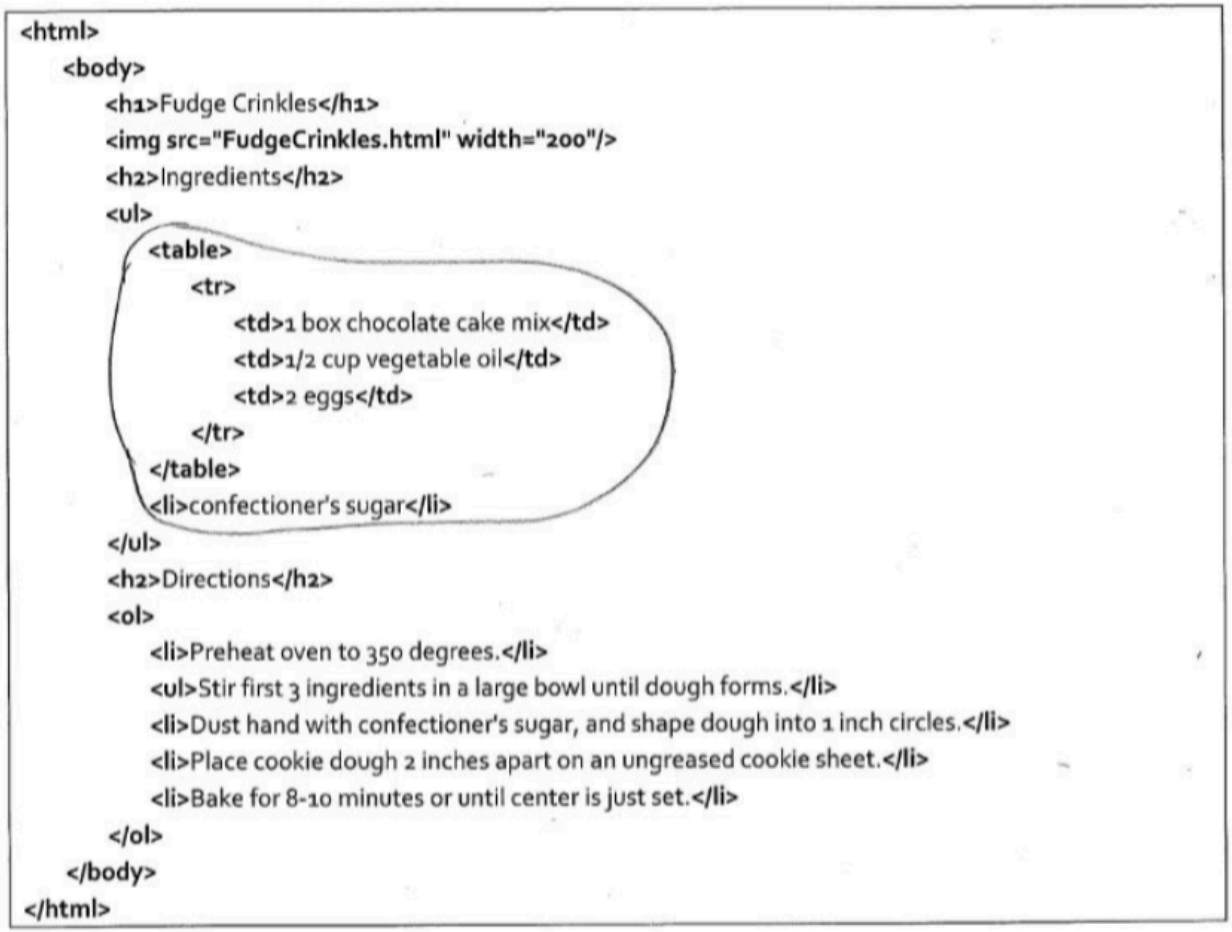
Sample Responses:

```
<html>
    <body>
        <h1>Fudge Crinkles</h1>
        <img src="FudgeCrinkles.html" width="200"/>
        <h2>Ingredients</h2>
        <ul>
            <table>
                <tr>
                    <td>1 box chocolate cake mix</td>
                    <td>1/2 cup vegetable oil</td>
                    <td>2 eggs</td>
                </tr>
            </table>
            <li>confectioner's sugar</li>
        </ul>
        <h2>Directions</h2>
        <ol>
            <li>Preheat oven to 350 degrees.</li>
            <ul>Stir first 3 ingredients in a large bowl until dough forms.</li>
            <li>Dust hand with confectioner's sugar, and shape dough into 1 inch circles.</li>
            <li>Place cookie dough 2 inches apart on an ungreased cookie sheet.</li>
            <li>Bake for 8-10 minutes or until center is just set.</li>
        </ol>
    </body>
</html>
```

I would change ".html" to ".png" or ".jpg" and if that fails I would see if the picture is in the correct folder.

Detailed Scoring Guide: Unit 3, Item 4c & 4d

Sample Responses:



```
<html>
    <body>
        <h1>Fudge Crinkles</h1>
        <img src="FudgeCrinkles.html" width="200"/>
        <h2>Ingredients</h2>
        <ul>
            <table>
                <tr>
                    <td>1 box chocolate cake mix</td>
                    <td>1/2 cup vegetable oil</td>
                    <td>2 eggs</td>
                </tr>
            </table>
            <li>confectioner's sugar</li>
        </ul>
        <h2>Directions</h2>
        <ol>
            <li>Preheat oven to 350 degrees.</li>
            <ul>Stir first 3 ingredients in a large bowl until dough forms.</li>
            <li>Dust hand with confectioner's sugar, and shape dough into 1 inch circles.</li>
            <li>Place cookie dough 2 inches apart on an ungreased cookie sheet.</li>
            <li>Bake for 8-10 minutes or until center is just set.</li>
        </ol>
    </body>
</html>
```

He did not have to make a table, to fix this, he must remove all the <td> tags and replace it with <li> and the </td> tags with . He must also remove the <table>, <tr>, </table>, </tr>, tags.

Detailed Scoring Guide: Unit 3, Item 4c & 4d

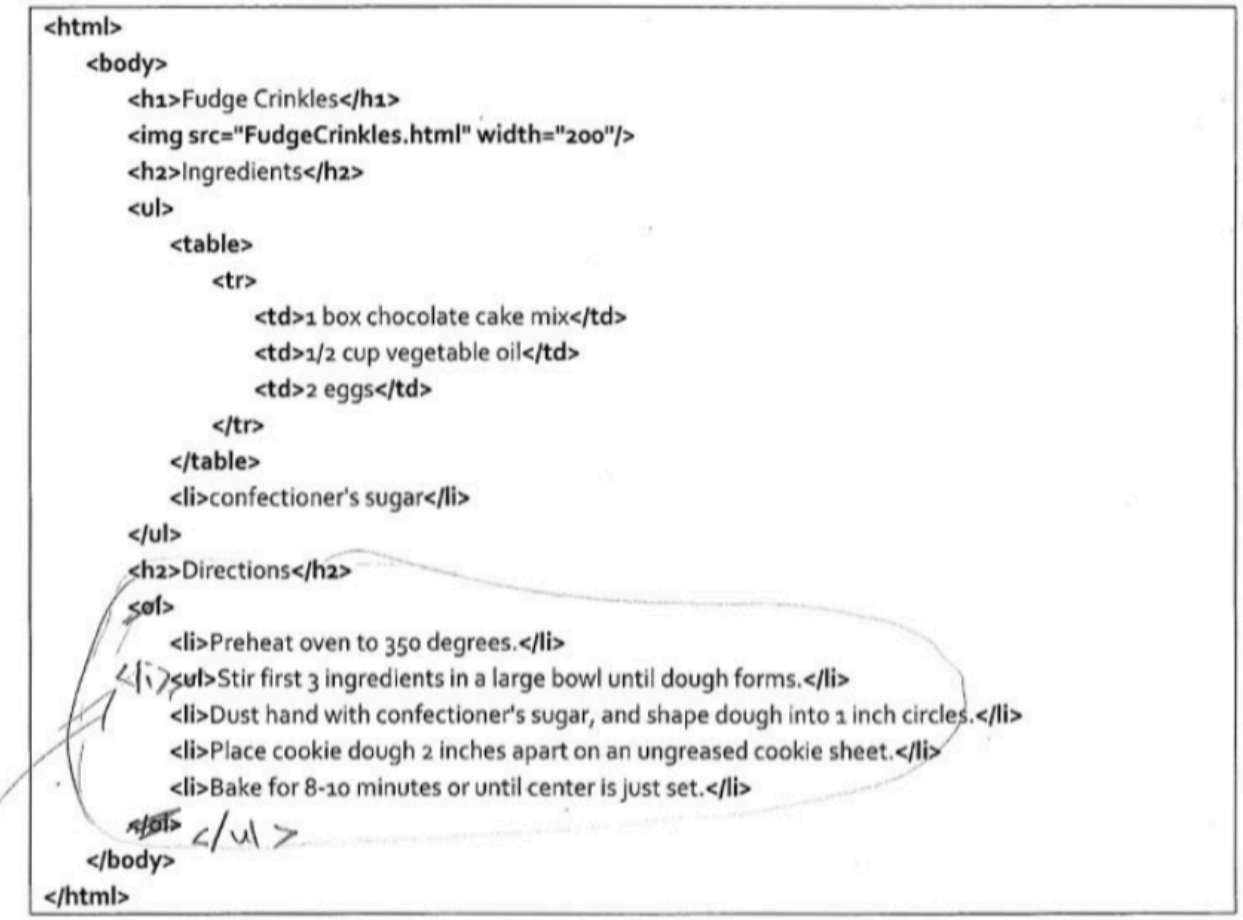
Sample Responses:

```
<html>
    <body>
        <h1>Fudge Crinkles</h1>
        <img src="FudgeCrinkles.html" width="200"/>
        <h2>Ingredients</h2>
        <ul>
            <table>
                <tr>
                    <td>1 box chocolate cake mix</td>
                    <td>1/2 cup vegetable oil</td>
                    <td>2 eggs</td>
                </tr>
            </table>
            <li>confectioner's sugar</li>
        </ul>
        <h2>Directions</h2>
        <ol>
            <li>Preheat oven to 350 degrees.</li>
            <ul>Stir first 3 ingredients in a large bowl until dough forms.</li>
            <li>Dust hand with confectioner's sugar, and shape dough into 1 inch circles.</li>
            <li>Place cookie dough 2 inches apart on an ungreased cookie sheet.</li>
            <li>Bake for 8-10 minutes or until center is just set.</li>
        </ol>
    </body>
</html>
```

I would fix the error in the code by changing <ul> to <li> because it affected the rest of the code, causing it to be a bulleted list instead of a numbered list.

Detailed Scoring Guide: Unit 3, Item 4c & 4d

Sample Responses:



```
<html>
    <body>
        <h1>Fudge Crinkles</h1>
        <img src="FudgeCrinkles.html" width="200"/>
        <h2>Ingredients</h2>
        <ul>
            <table>
                <tr>
                    <td>1 box chocolate cake mix</td>
                    <td>1/2 cup vegetable oil</td>
                    <td>2 eggs</td>
                </tr>
            </table>
            <li>confectioner's sugar</li>
        </ul>
        <h2>Directions</h2>
        <ol>
            <li>Preheat oven to 350 degrees.</li>
            <ul>Stir first 3 ingredients in a large bowl until dough forms.</li>
            <li>Dust hand with confectioner's sugar, and shape dough into 1 inch circles.</li>
            <li>Place cookie dough 2 inches apart on an ungreased cookie sheet.</li>
            <li>Bake for 8-10 minutes or until center is just set.</li>
        </ol> </ul>
    </body>
</html>
```

Remove the <ol> and tags and add a tag. Change the <ul> tag to the <li> tag.

Unit 3, Item 5

5. Below are codes for a CSS file and an HTML file that are in the same folder directory.

CSS Code (style.css)

```
body {
    background-color: gray;
}
h1 {
    color: blue;
}
p {
    color: yellow;
}
```

Unit 3, Item 5

HTML Code (astronomy.html)

```
<html>
    <head>
        <title>Space, the New Frontier</title>
        <link rel="stylesheet" type="text/css" href="style.css">
        <style type="text/css">
            h1 {
                color: green;
            }
        </style>
    </head>
    <body>
        <h1>To Pluto and Beyond</h1>
        <p  style="color: purple;">
            The New Horizons spacecraft sent back images of Pluto!
        </p>
        <img src="pluto.jpg" />
        <p >
            The spacecraft will continue its journey beyond Pluto.
        </p>
    </body>
</html>
```

Use the CSS and HTML codes shown above to answer the following questions.

Unit 3, Item 5

a) What color would the text "The New Horizons spacecraft sent back images of Pluto!" appear as on the web page?

_____

b) What color would the text "The spacecraft will continue its journey beyond Pluto" appear as on the web page?

_____

c) What color would the text "To Pluto and Beyond" appear as on the web page?

_____

d) Explain why the text "To Pluto and Beyond" appears as the color you stated in part (c).

Detailed Scoring Guide: Unit 3, Items 5a, 5b, & 5c

Rubric for Task 5a

Total points: **1 point**

- **1 point** for answering "purple" for the "The New Horizons spacecraft sent back images of Pluto!" text color.

Rubric for Task 5b

Total points: **1 point**

- **1 point** for answering "yellow" for the "The spacecraft will continue its journey beyond Pluto" text color.

Rubric for Task 5c

Total points: **1 point**

- **1 point** for answering "green" for the "To Pluto and Beyond" text color.

Detailed Scoring Guide: Unit 3, Item 5d

Rubric for Task 5d

Total points: **1 point**

- **1 point** for providing an appropriate explanation that indicates that the text "To Pluto and Beyond" uses the *h1* (heading 1) style defined in the internal style sheet.
  - A minimal appropriate explanation would discuss inheriting the color from the internal sheet style (e.g., *"It gets the color from the style in the head of the HTML file," "It's green because of the h1 style at the top* [Note: It's clear 'style at the top' here refers to the HTML top because green appears in only the HTML code]*"*).
    - **Note:** The student should refer to the internal style sheet in some manner (e.g., "internal style," "style at the top of HTML page," "style tag area," "style in the head") to receive the point.
      - If the student does not name the internal style sheet, it should be clear that the student is referring to the *h1* selector from the internal style sheet (in the HTML file) instead of the external style sheet (from the CSS file) when determining color inheritance (e.g., *"It's green because h1 is defined again in the HTML code," "There are two h1s with colors, but it's green because it comes after the first"*).
    - **Note:** The student does not have to explicitly mention the *h1* tag or style selector.
  - Additional examples of appropriate explanations:
    - *"The text is in a <h1> tag, so I look for CSS that defines h1, which I see in the internal style sheet in the <head> section."*
    - *"The text should be blue because of the external CSS file, but because it's defined again in the HTML file, this overwrites it to green."*

Detailed Scoring Guide: Unit 3, Item 5d

Sample Responses:

The internal style override the external style so the h1 would follow the h1 style in the internals.

The reason why is because in the HTML code it says that h1 will be green. To Pluto and Beyond is in the H1, while everything else is in p is set to be yellow, so it is green because it sets H1 to color green and is in the h1 tag.

Because the CSS will override the HTML so it will be blue.

Questions?

Thanks for joining ☺

Stay in touch!

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SRI International

Center for Technology in Learning

Unit 1 Rubric Overview

Unit 1, Item 1

1. **Four characteristics of a computer are:**

    1. **It takes in input.**
    2. **It produces output.**
    3. **It processes information.**
    4. **It stores information.**

A microwave can heat up or cook food for a set amount of time. A user can enter a specific heating time or select a button with a set time based on the food. For example, a popcorn button will cook popcorn in about 4 minutes when pressed.

a) Based on the characteristics above, is a microwave a computer or not?

- ☐ A microwave **IS** a computer.
- ☐ A microwave is **NOT** a computer.

b) Select **ONE** of the characteristics of a computer, and explain why a microwave does or does not have the selected characteristic.

- ☐ It takes in input.
- ☐ It produces output.
- ☐ It processes information.
- ☐ It stores information.

Explain why a microwave **DOES** or does **NOT** have the characteristic you selected.

Unit 1, Item 1

c) Select **ONE** of the characteristics of a computer that is **different** from your selection in part (b), and explain why a microwave does or does not have the selected characteristic.

- ☐ It takes in input.
- ☐ It produces output.
- ☐ It processes information.
- ☐ It stores information.

Explain why a microwave **DOES** or does **NOT** have the characteristic you selected.

Detailed Scoring Guide: Unit 1, Item 1a

Rubric for Task 1a (scored using Task 1b and Task 1c)

- **1 point** if the responses from Task 1b and Task 1c support the selection in Task 1a.
  - The student selects "A microwave IS a computer" AND provides two explanations relating why the microwave has the corresponding characteristics.

    OR
  - The student selects "A microwave is NOT a computer" AND provides at least one explanation relating why the microwave does not have the corresponding characteristic.
  - **Note:** The correctness of the explanations does not matter for this point (correctness is examined in the rubrics for Task 1b and Task 1c). The intent is to see if the explanations supplied support the selection in Task 1a.

Detailed Scoring Guide: Unit 1, Item 1a

Sample Responses:

Task 1a:

- ☐ A microwave **IS** a computer.
- ☑ A microwave is **NOT** a computer.

Task 1b:

> The microwave does not store information and does not have any type of memory. It will not remember what button the user has pressed before or any other information.

Task 1c:

> When a button is pressed, the microwave takes that as an input and soon after carries out the input by pressing it and then giving an output of a warm meal.

Note: The response to Task 1b supports the claim that the microwave is not a computer and therefore Task 1a receives a point. The answer to 1c is not taken into account.

Detailed Scoring Guide: Unit 1, Item 1a

Sample Responses:

Task 1a:

- ☑ A microwave **IS** a computer.
- ☐ A microwave is **NOT** a computer.

Task 1b:

It does have characteristics b/c it processes the time you put or food selected to heat.

Task 1c:

It doesn't have a characteristic b/c it does not produce an output.

Note: The response to Task 1c does not supports the claim that the microwave is a computer and therefore Task 1a does not receive a point. The answer to 1b is not taken into account.

Detailed Scoring Guide: Unit 1, Item 1b & 1c

Rubric for Task 1b

Total points: **1 point**

- **1 point** for providing an appropriate explanation for the characteristic selected.
  - An appropriate explanation must relate the microwave to the characteristic selected (i.e., it takes in input, it produces output, it processes information, it stores information). The response could be an example of a feature or lack of a feature in a microwave.
  - **Note:** Misconceptions about microwaves and how they work do not count against the score (e.g., *"A microwave does not store information because it just reacts to the buttons and doesn't save that anywhere"*).
  - **Note:** If the student selects multiple characteristics, the student may receive the point as long as the explanation appropriately addresses at least one of the selected characteristics.

Detailed Scoring Guide: Unit 1, Item 1b & 1c

Sample Responses:

- ☐ It takes in input.
- ☑ It produces output.
- ☐ It processes information.
- ☐ It stores information.

A microwave produces output because before putting it in the microwave the food isn't heated up and after putting it in the output is heated food.

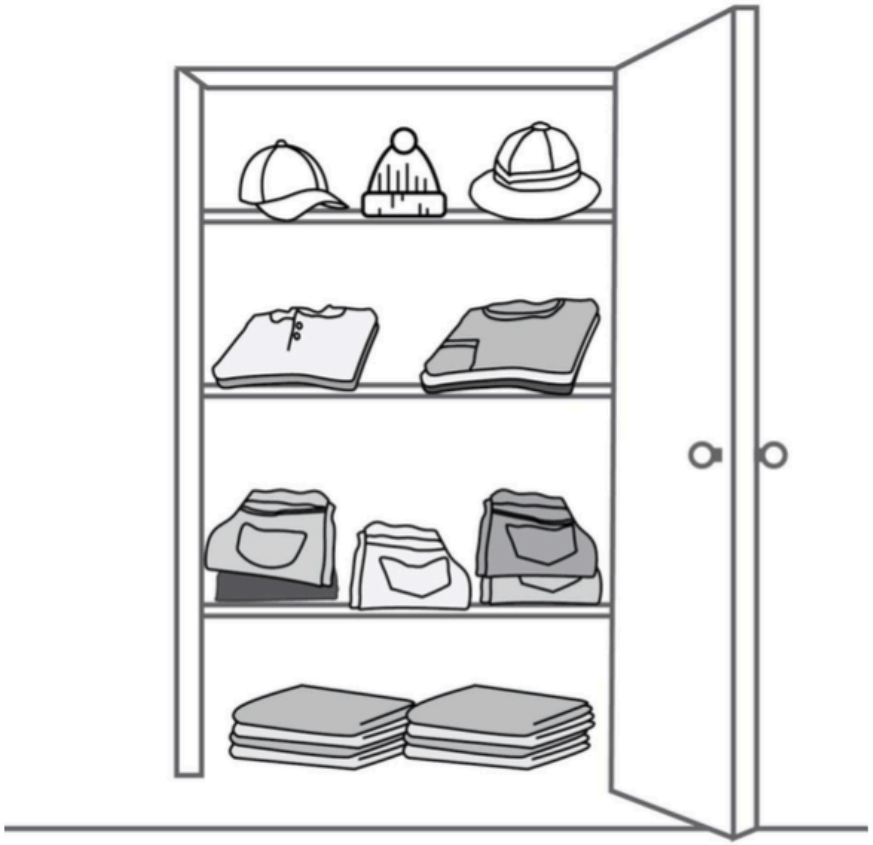
- ☐ It takes in input.
- ☐ It produces output.
- ☑ It processes information.
- ☐ It stores information.

Has the ability to remember things such as how long popcorn should be cooked for

Unit 1, Item 2

2. **Carla programmed a robot to select clothes for her. The robot is able to move around the room, open and close doors, and pick up and drop objects.**

Carla's Closet



Below is a set of instructions for the robot once the robot is inside the closet:

1. **Take out the top pair of pants from the left side of the third shelf down.**
2. **Take out a T-shirt.**
3. **Take out the hat from the top shelf that matches the outfit.**

Unit 1, Item 2

a) Select one step in the instructions that a robot would have difficulty completing.

- ☐ Take out the top pair of pants from the left side of the third shelf down.
- ☐ Take out a T-shirt.
- ☐ Take out the hat from the top shelf that matches the outfit.

Explain why a robot would have difficulty completing the selected step.

b) Rewrite the step selected in part (a) so that it could be easier for the robot to complete.

Detailed Scoring Guide: Unit 1, Item 2a

Rubric for Task 2a

Total points: **1 point**

- **1 point** for providing an appropriate explanation that discusses difficulties the robot would have with the instruction selected.
  - Appropriate explanations should indicate that the instruction is either:
    - Not precise or not clear enough (i.e., "Take out a T-shirt").

      OR
    - Too subjective (i.e., "Take out the hat from the top shelf that matches the outfit").
      - **Note:** Indicating that the robot doesn't know how to match something is enough to receive the point.
  - **Note:** If the student selects multiple instructions, the student may receive the point as long as the explanation appropriately addresses at least one of the selected instructions.

Detailed Scoring Guide: Unit 1, Item 2a

Sample Responses:

- ☐ Take out the top pair of pants from the left side of the third shelf down.
- ☑ Take out a T-shirt.
- ☐ Take out the hat from the top shelf that matches the outfit.

A robot would have difficulty completing the step because it does not have specific information. The robot would not know where the t-shirt is located or what t-shirt to get. This step needs to have more information.

- ☐ Take out the top pair of pants from the left side of the third shelf down.
- ☐ Take out a T-shirt.
- ☑ Take out the hat from the top shelf that matches the outfit.

The robot does not have a sense of fashion, or a feeling to express oneselve through clothing, so the robot would not know what "matches" the outfit.

Detailed Scoring Guide: Unit 1, Item 2a

Sample Responses:

- ☐ Take out the top pair of pants from the left side of the third shelf down.
- ☐ Take out a T-shirt.
- ☑ Take out the hat from the top shelf that matches the outfit.

The robot would have difficulty completing the step to take out the top hat from the self that matches the outfit because it is only programmed to move around the room, open & close doors, and pick up & drop objects. In this case the robot is not programmed to do specific things.

Detailed Scoring Guide: Unit 1, Item 2b

Rubric for Task 2b

Total points: **1 point**

- **1 point** for providing a rewritten instruction that is more precise or less subjective than the instruction selected in Task 2a.
  - The rewritten instruction should be easier for the robot to follow than the original instruction.
  - **Note:** If the student selected multiple instructions in Task 2a, the student may receive the point as long as the rewritten instruction clearly addresses at least one of the selected instructions.

Sample Responses:

- ☐ Take out the top pair of pants from the left side of the third shelf down.
- ☑ Take out a T-shirt.
- ☐ Take out the hat from the top shelf that matches the outfit.

Task 2b:

Take the top shirt on the right side of the second shelf.

Detailed Scoring Guide: Unit 1, Item 2b

Sample Responses continued:

- ☐ Take out the top pair of pants from the left side of the third shelf down.
- ☐ Take out a T-shirt.
- ☑ Take out the hat from the top shelf that matches the outfit.

Task 2b:

Take out the hat that has the same color of the t-shirt from the second shelf.

- ☐ Take out the top pair of pants from the left side of the third shelf down.
- ☐ Take out a T-shirt.
- ☑ Take out the hat from the top shelf that matches the outfit.

Task 2b:

Take out a hat from the top shelf.

Unit 1, Item 3

3. You are communicating using a social media profile (e.g., on Facebook, Twitter, Instagram).

a) List two pieces of personal information that are typically on a social media profile that you would not want everyone to see.

#1: _____

#2: _____

b) Pick one of the pieces of information from part (a).

Information from (a): _____

Describe one legal, ethical, or privacy concern of someone you don't know accessing that information.

c) Describe one benefit of communicating using social media instead of communicating by phone calls or text messages.

d) Describe one drawback of communicating using social media instead of communicating by phone calls or text messages.

Detailed Scoring Guide: Unit 1, Item 3a

Rubric for Task 3a

Total points: **2 points**

- **1 point** for providing an appropriate piece of information #1.
  - The information should be what might be seen or put on a social media profile. Examples include:
    - An address
    - Personal information (including but not limited to likes and dislikes)
    - A picture
    - Phone number
    - Email
  - **Note:** The information needs to be something that is clearly digital and can be put on social media. If the student provides a physical object that is not clearly digital (e.g., "my car" instead of "picture of my car"), the student does not receive the point.
  - **Note:** Misconceptions about information that are typically on a social media profile (e.g., sensitive information such as credit card numbers or passwords), are acceptable as long as the information is clearly digital.
- **1 point** for providing an appropriate piece of information #2.
  - See rubric description for piece of information #1 above.

Detailed Scoring Guide: Unit 1, Item 3b

Rubric for Task 3b

Total points: **1 point**

- **1 point** for describing an appropriate concern from a stranger having access to personal information.
  - The concern described should relate to one of the pieces of information picked in Task 3a.
  - **Note:** If information from Task 3a is incorrect, the student may still receive the point for Task 3b if the concern stated is valid.

Sample Responses:

Information from (a): Home Address

If someone I didn't know did find out what my home address was, they could potentially show up at my house and threaten me and my family, or blackmail me by sending mail to my mailbox.

Information from (a): picture

it depends what the picture is showing

Detailed Scoring Guide: Unit 1, Item 3c

Rubric for Task 3c

Total points: **1 point**

- **1 point** for describing an appropriate benefit from communicating via social media.
  - Appropriate benefits should indicate an advantage of social media over phone calls or text messages. Benefits should address:
    - One-to-many communication (e.g., chat with many people at once)
    - Public communication (e.g., post comments strangers can read)
    - Communication between people who would otherwise not communicate (e.g., send messages to strangers, follow acquaintances' posts)
  - **Note:** If the student only provides a characteristic of social media that phone calls and text messages also allow (e.g., ability to stay in touch with friends or family), the student does not receive the point. In order to receive the point, the characteristic must be unique to social media (e.g., ability to stay in touch with friends and family by sharing photos, ability to stay connected with friends you would otherwise lose touch with).

Detailed Scoring Guide: Unit 1, Item 3c

Sample Responses:

You can reach more people in a smaller amount of time instead of having to talk to each person individually.

One benefit to communicate using social media is to be able to share all kinds of information any where on the web for others to access it and use it.

One of the benefits is that you can communicate with friends and family member who you might not live close to.

A benefit is being able to reach out to a person in seconds.

Detailed Scoring Guide: Unit 1, Item 3d

Rubric for Task 3d

Total points: **1 point**

- **1 point** for describing an appropriate drawback from communicating via social media.
  - Appropriate drawbacks should indicate a disadvantage of social media over phone calls or text messages. Drawbacks should address:
    - Communication privacy (e.g., posts can be read by strangers, people are anonymous, information is permanently stored on third-party servers, private messages may be spread)
      - **Note:** The drawback could relate to the reaction from public scrutiny or lack of privacy (e.g., *"It might get negative comments from people seeing the post," "The person might get negative reactions from posting it because the article has something people disagree with"*).
    - Communication delay (e.g., people may not respond to social media messages quickly)
  - **Note:** If the student only provides a characteristic of social media that phone calls and text messages also allow (e.g., ability to stay in touch with friends or family), the student does not receive the point. In order to receive the point, the characteristic must be unique to social media (e.g., ability to stay in touch with friends and family by sharing photos, ability to stay connected with friends you would otherwise lose touch with).

Detailed Scoring Guide: Unit 1, Item 3d

Sample Responses:

Anyone can have access to information you post online and you have no idea who can see it because although you may share something privately the people you shared this information with may not keep it private.

A privacy concern from using social media is whether or not to share information (ex. pictures) of someone else without their permission. This action could lead to consequences for that specific person. Even though he or she did not even post the information.

People using Facebook or any other social media expect the company to keep their private information safe from wrongdoers.

Unit 1, Item 4

4. Imagine you and your classmate have to do a report on smoking. Your teacher says you can conduct your research on the internet. Information from the internet that you include in your report has to be:

- **Written by qualified authors**
- **Current**
- **Based on facts rather than opinions (not biased)**

a) Your classmate suggests posting a question to a social media website (such as Facebook) as a starting point for your search.

Would a social media website be an appropriate resource as a starting point for your search?

☐ Yes, it would be an appropriate resource.

☐ No, it would not be an appropriate resource.

Explain why a social media website would or would not be an appropriate resource.

Here is a list of results found by searching for information on smoking:

1. *Smoking is Bad* – A blog written by Joe, a plumber from Ohio, who quit smoking two years ago and has documented his experience. Last updated a month ago.
2. *Smoking and Your Health* – The WebMD site created by doctors across the United States, which contains a wide range of information about smoking and health. Last updated two weeks ago.
3. *Prohibiting Smoking is Wrong* – A web site created by two major tobacco companies, which argues that public smoking should not be banned. Last updated 5 years ago.

Unit 1, Item 4

b) Complete the table below. For each source listed:

- Indicate whether or not you would use the source for your report.
- Explain why you would or would not use that source.

Source	Would you use this source?	Explanation for why or why not you would use this source
1. *Smoking is Bad*	☐ Yes ☐ No	
2. *Smoking and Your Health*	☐ Yes ☐ No	
3. *Prohibiting Smoking is Wrong*	☐ Yes ☐ No	

Detailed Scoring Guide: Unit 1, Item 4a

Rubric for Task 4a

Total points: **1 point**

- **1 point** for providing an appropriate explanation for why or why not social media would be a good starting resource.
  - The student selects "Yes, it would be an appropriate resource" AND provides an explanation for why it may be a good starting resource while also indicating that additional information or investigation would be required.

    OR
  - The student selects "No, it would not be an appropriate resource" AND specifically references the idea of bias and/or authority.

Sample Responses:

☑ Yes, it would be an appropriate resource.
☐ No, it would not be an appropriate resource.

It could be, because you can get some logical and decent answers to start from.

Detailed Scoring Guide: Unit 1, Item 4a

Sample Responses continued:

☐ Yes, it would be an appropriate resource.
☑ No, it would not be an appropriate resource.

It would not be an appropriate source because social media is mainly subjective place where people express opinions rather than fact. There is a more entertainment focus rather than academic or scientific.

☑ Yes, it would be an appropriate resource.
☐ No, it would not be an appropriate resource.

The data are from people, a social media website's resource are the current resource, which I think is better then search for data that is not recently updated.

Detailed Scoring Guide: Unit 1, Item 4b

Rubric for Task 4b

Total points: **3 points**

- **1 point** for providing an appropriate selection and explanation for why or why not *Smoking is Bad* (Source 1) should be used.
  - The student selects "No" AND indicates that the source is subjective/biased (i.e., anecdotal, based on opinions) and/or is not written by a subject matter expert.

    OR
  - The student selects "Yes" AND indicates that the author has relevant experience, which makes him a qualified author.
    - **Note:** Indicating that the source qualifies to be used as an example of relevant experience (i.e., primary source, first-hand source) is enough to receive the point.
  - **Note:** If the student only addresses how the source is recent or not recent without addressing authority or bias, the student does not receive the point. Whether the student indicates that the source is recent or not does not count towards the point.
- **1 point** for selecting "Yes" for *Smoking and Your Health* (Source 2) AND for providing an appropriate explanation for why Source 2 should be used.
  - The student selects "Yes" AND indicates that the source is objective/unbiased (i.e., scientific, based on facts), and/or is written by qualified authors (i.e., doctors, professionals in the medical field).
  - **Note:** If the student only addresses how the source is recent without addressing authority or bias, the student does not receive the point. If the student indicates that the source is not recent, the student does not receive the point.
- **1 point** for selecting "No" for Prohibiting Smoking is Wrong (Source 3) AND for providing an appropriate explanation for why Source 3 should NOT be used
  - The student selects "No" AND indicates that the source is not recent and/or is biased.

Detailed Scoring Guide: Unit 1, Item 4b

Sample Responses:

Source	Would you use this source?	Explanation for why or why not you would use this source
1. *Smoking is Bad*	☑ Yes ☐ No	Yes, I would use this source because it shows someone who has experienced dealing with tobacco and how it was bad. The writer might explain issues of smoking that can influence others to quit.
2. *Smoking and Your Health*	☑ Yes ☐ No	Yes, I would use this source because it was created by doctors who are experienced and know about smoking and health. It is reliable because doctors know many things about health and our bodies.
3. *Prohibiting Smoking is Wrong*	☐ Yes ☑ No	No, I would not rely on this because they could just be promoting their companies and influencing others that smoking is not bad. They want more smokers so their company can get more money.

Detailed Scoring Guide: Unit 1, Item 4b

Sample Responses:

Source	Would you use this source?	Explanation for why or why not you would use this source
1. *Smoking is Bad*	☑ Yes ☐ No	I would use this source because it's giving information of a person who experienced it and went throu all the problems
2. *Smoking and Your Health*	☑ Yes ☐ No	I would use this source because it giving the information of a doctors perspective of smoking and what the cause and affect of it and how it affects you health and body.
3. *Prohibiting Smoking is Wrong*	☑ Yes ☐ No	I would use this source because it's giving me information of what other people think of smoking and how it should be used and not banned. It can be used as a counter claim.

Detailed Scoring Guide: Unit 1, Item 4b

Sample Responses:

Source	Would you use this source?	Explanation for why or why not you would use this source
1. *Smoking is Bad*	☐ Yes ☑ No	It could just be untrue points on smoking.
2. *Smoking and Your Health*	☑ Yes ☐ No	Doctors who know the health risks have the best point of view.
3. *Prohibiting Smoking is Wrong*	☑ Yes ☐ No	Actual companies who have tobacco tell them about it.

Unit 1, Item 5

5. Below are a picture and a textual description of the same scene. Compare what information you can find in these two representations.

Picture

Text

The boy was reading before bedtime.

He picked his favorite story to read.

The story was about a dragon guarding the Queen's treasure chest.

The dragon wraps his tail around the treasure chest.

Unit 1, Item 5

Use the picture and text shown above to fill in the table below with ONE piece of information that is found:

- In the text but **NOT** in the picture
- In the picture but **NOT** in the text
- In the picture **AND** in the text

	Piece of information that is found
Text ONLY (In the text but NOT in the picture)	
Picture ONLY (In the picture but NOT in the text)	
BOTH (In the picture AND in the text)	

Detailed Scoring Guide: Unit 1, Item 5

Rubric for Task 6a

Total points: **3 points**

- **1 point** for providing an appropriate piece of information found only in the text. Acceptable responses include:
  - It was bedtime (i.e., night time)
  - The boy was reading his favorite story
  - What the boy was reading (a story about a dragon guarding the Queen's treasure chest)
  - The chest is the Queen's treasure chest
- **1 point** for providing an appropriate piece of information found only in the picture. Examples include:
  - Colors
  - Placement of objects
  - Expressions on the faces
  - Physical features of the characters
  - Relative sizes
  - Descriptions of objects in the scenery
  - The boy was in bed.
- **1 point** for providing an appropriate piece of information found in both the picture and the text. Examples include:
  - The boy was reading.
  - The story was about a dragon and a chest.
  - The dragon's tail was wrapped around the treasure chest.

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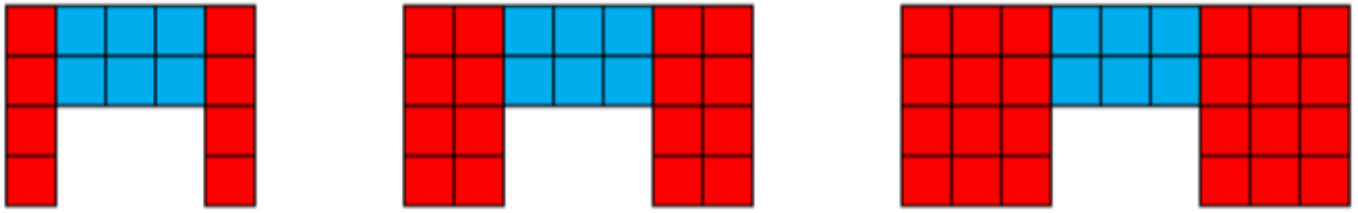
Center for Technology in Learning

Unit 2 Rubric Overview

Unit 2, Item 1

1. Below is a pattern. In Step 1 of the pattern, there are 14 blocks.



Step 1 Step 2 Step 3

a) If the pattern continues repeating in the same way, how many blocks are there at **Step 5**?

_____ blocks

b) Explain how you found your answer.

Detailed Scoring Guide: Unit 2, Item 1a & 1b

Rubric for Task 1a

Total points: **1 point**

- **1 point** for answering 46 blocks.

Rubric for Task 1b

Total points: **1 point**

- **1 point** for providing an appropriate explanation regarding the method used to solve Task 1a.
  - The answer for Task 1a could be derived either manually or mathematically with a formula.
    - The student may solve the problem manually by correctly identifying the pattern (e.g., add 8 blocks for each new step, add 2 blocks on each side every time, add 16 blocks to step 3). As long as it is clear that the student understands the pattern, the student may receive the point. The numbers must be accurate (except for the final solution).
      - **Note:** If the student indicates just counting the blocks, the student may still receive the point as long as the final solution is correct (i.e., 46 blocks).
    - The student may solve the problem by providing an appropriate mathematical formula (i.e., $y = 8x + 6$). The numbers must be accurate (except for the final solution for y).
  - **Note:** The point for the explanation in Task 1b is scored independently from the answer provided in Task 1a. Regardless of the student's answer in Task 1a, if the student provides an appropriate explanation, the student receives the point.

Detailed Scoring Guide: Unit 2, Item 1b

Sample Responses:

I counted the blocks. Step 1: 14 Step 2: 22 Step 3: 30. When I subtracted 22-14 I got 8 then I did 30-22 and it was also 8. So I figure if I add 8 it'll give me the answer for steps 4 & 5.

Step 4: 30 + 8 = **38 blocks**

Step 5: 38 + 8 = **46 blocks**

Total blocks = 8x + 6
= 8(5) + 6
= 40 + 6
= 46 blocks

I counted all the block from step 1 - step 3. When I stop at step 3 I counted 4 extra blocks for step 4 then I add another 4 box to get step 5 answer which I got 46 blocks in total.

Unit 2, Item 2

2. Use the table below to convert the binary numbers into a text message by first translating the binary numbers into decimal numbers and then matching the numbers to the correct letter using the Key below. The first letter is done for you.

Key

Decimal	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Letter	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O

Binary	**0011**	**1111**	**0100**	**1001**	**1110**	**0111**
Decimal	*3*					
Letter	*C*					

Text message: _____

Detailed Scoring Guide: Unit 2, Item 2

Rubric for Task 2

Total points: **2 points**

Binary	**0011**	**1111**	**0100**	**1001**	**1110**	**0111**
Decimal	*3*	*15*	*4*	*9*	*14*	*7*
Letter	*C*	*O*	*D*	*I*	*N*	*G*

Text message: *CODING*

- **2 points** for providing the correct corresponding decimal number for 4-5 binary columns (excluding the first column labeled 0011, which was provided).

  OR

- **1 point** for providing the correct corresponding decimal number for 2-3 binary columns (excluding the first column labeled 0011, which was provided).

Note: The answer for the corresponding letters/text message (CODING) is not scored.

Unit 2, Item 3

3. **You are in charge of ordering banners for a school assembly. The banners will be made up of two types of panels: the school mascot and the school logo.**

School mascot:

School logo:

Here is the pattern for a 3x4 banner (3 panels down and 4 panels across):

Unit 2, Item 3

a) The school needs banners with the following sizes:

- 5x5
- 20x20
- 100x35

How would you describe the pattern over the phone to a designer so that she can recreate the pattern for a banner of any size?

The designer needs to know how many panels of each type are required to make banners of different sizes. The designer considers two methods:

- **Method 1:** Each time a request for a new banner size comes in, draw out the banner and then count the number of school logo panels and school mascot panels.
- **Method 2:** Create two mathematical formulas (equations): one to calculate the number of school logo panels and a second to calculate the number of school mascot panels in the banner. Use these formulas each time a request for a new banner size comes in.

b) If the designer gets orders for many banners of different sizes, which method would you recommend?

☐ Method 1

☐ Method 2

Explain why you recommend one method over the other.

Detailed Scoring Guide: Unit 2, Item 3a

Rubric for Task 3a

Total points: **1 point**

- **0.5 points** for indicating that the panels repeat in an alternating pattern AND that the pattern starts with the school mascot (in the top left corner). The student must include both types of panels in their description
  - The student may indicate that the panels alternate by saying that the same panel design is never next to each other).
- **0.5 points** for indicating that the panels alternate both by row AND column (i.e., across and down).
  - The student may indicate the alternating pattern of the rows and columns by describing how the rows alternate (i.e., odd rows start with school mascot and even rows start with school logo).

Sample Responses:

The upper left-hand corner of the banner should always be the mascot. Alternate between the logo and mascot both vertically and horizontally.

I would say the pattern needs to have the school mascot then the logo over and over again. And for each it has to be the same number across and the same number down.

Detailed Scoring Guide: Unit 2, Item 3a

Sample Responses continued:

checkerboard pattern. Penguin first.

I would describe it as the first image on the poster would be the school mascot. Then the next image would be the school logo.

Detailed Scoring Guide: Unit 2, Item 3b

Rubric for Task 3b

Total points: **2 points**

- **1 point** for selecting "Method 2."
- **1 point** for providing an appropriate explanation that supports using Method 2.
  - The explanation could describe a benefit of using a formula (Method 2):
    - A formula is easier or faster to use (once already created).
    - A formula could be used in different contexts (i.e., different banner sizes) or reused.
    - A formula provides accurate information (i.e., less prone to error).
    - A formula could be programmed or automated.
    - A formula provides a systematic way to calculate the number of panels of the school logo and school mascot.

    OR
  - The explanation could describe a drawback of calculating the number of panels manually (Method 1). The drawbacks are the inverse of the benefits of using Method 2 listed above (e.g., *"counting by hand is time consuming," "Method 1 cannot be reused"*).

    OR
  - The explanation could compare Method 1 with Method 2 using any of the criteria described above.
  - **Note:** If the student provides a formula, it does not have to be correct (in particular, the student may not realize that the formula differs depending on if there is an odd number of panels or an even number of panels). However, the student only receives the point if an appropriate explanation following the criteria above is provided.
  - **Note:** The point for the explanation is scored independently from the selection. Regardless of the student's selection, if the student provides an appropriate explanation that supports using Method 2, the student receives the point.

Detailed Scoring Guide: Unit 2, Item 3b

Sample Responses:

☐ Method 1
☑ Method 2

Method 2 is better since you need to only calculate the number of panels once and reuse the formula everytime a request for a new banner size comes in, while method I requires you to draw the banner and count the number of panels each time which will consume more time making it not efficient.

☐ Method 1
☑ Method 2

Using the formula n-I, n being the # of school mascots. N-I would (equal to) give you # of logo panels.

Unit 2, Item 4

4. A school principal is working on assigning 9 students to 3 after school clubs called Club A, Club B, and Club C. Each student listed their first, second, and third choice club. Each student will join only one club. Each club can have at most 3 students.

Below are the students' choices:

Student Name	1st choice	2nd choice	3rd choice
Ajay	A	B	C
Bella	A	B	C
Cammy	B	A	C
Diego	A	B	C
Eva	A	C	B
Gabby	C	A	B
Juan	C	B	A
Luis	A	C	B
Neil	C	A	B

a) If each student was assigned his or her 1st choice club, would this solve the problem?

☐ Yes

☐ No

Explain your answer.

Unit 2, Item 4

Below is one method the principal could use to solve the problem.

Method 1:

1. Start with Ajay. Do steps 2 through 4, then move to the next student alphabetically on the list and repeat.
2. If the student's 1st choice club has an opening, then assign the student to that club.
3. If the student's 1st choice club is full, then check their 2nd choice. If their 2nd choice has an opening, then assign the student to their 2nd choice club.
4. If their 2nd choice club is full, then assign them to their 3rd choice club.

b) Use Method 1 to determine which student will be in which club. Write the names for the students that would be selected for each club in the corresponding boxes in the table below.

Below is another method the principal could use to solve the problem.

Method 2:

1. Make a list for each club. Put students on the list for their 1st choice club.
2. Start with the list for Club A. If there are more than 3 students on the list, then do the following:
    a. Find a student on this list whose 2nd choice club has fewer than 3 students.
    b. Move the student into the list for their 2nd choice club.
    c. Check the list again. If there are still more than 3 students on this list, repeat Step 2.
3. If the list for Club A has 3 or fewer students on it, repeat step 2 using Club B instead of Club A.
4. Then repeat step 2 using Club C.

Unit 2, Item 4

c) Use Method 2 to determine which students will be in which clubs.

Here are the lists after Step 1:

List for Club A	List for Club B	List for Club C
Ajay Bella Diego Eva Luis	Cammy	Gabby Juan Neil

Use these lists to follow Method 2. Write the names for the students that would be assigned to each club in the corresponding boxes in the table below.

	Club A	Club B	Club C
Method 2: Student Names			

Unit 2, Item 4

d) Would each of the methods solve the problem?

- ☐ Yes
- ☐ No

e) Select the method that would make the most students happy with their club assignment.

- ☐ Method 1
- ☐ Method 2

Explain why one method would make more students happy than the other.

Detailed Scoring Guide: Unit 2, Item 4a

Rubric for Task 4a

Total points: **1 point**

- **1 point** for selecting "No" AND for explaining that there would be too many students in at least one of the clubs.
  - The explanation should indicate that assigning each student to their first choice club would result in a club with too many students (i.e., Club A would have more than 3 students, Club A would have 5 students), thus not meeting the criteria that each club can have at most 3 students.
    - **Note:** The student does not need to identify which club would have more than 3 students in order to receive the point.
  - **Note:** If the student selects "Yes," the student does not receive the point.

Sample Responses:

☐ Yes

☑ No

Because there must be "at most 3 students" in each club. If they were assigned their 1st choice, 5 would go to A, 3 would go to C, and 1 would go to B, which doesn't meet the requirements.

☐ Yes

☑ No

No this would not solve the problem be Club B would only have 1 student.

Detailed Scoring Guide: Unit 2, Items 4b, 4c, & 4d

Rubric for Task 4b

Total points: **2 points**

	Club A	Club B	Club C
Method 1: Student Names	*Ajay* *Bella* *Diego*	*Cammy* *Luis* *Neil*	*Eva* *Gabby* *Juan*

- **2 points** for placing all 9 students in the correct club using Method 1.
  OR
- **1 point** for placing 7 or 8 out of the 9 students in the correct club using Method 1.

Rubric for Task 4c

Total points: **2 points**

	Club A	Club B	Club C
Method 2: Student Names	*[1 of either Ajay, Bella, or Diego]* *Eva* *Luis*	*Cammy* *[2 of either Ajay, Bella, or Diego—NOT whoever is in Club A]*	*Gabby* *Juan* *Neil*

- **2 points** for placing all 9 students in the correct club using Method 2.
  OR
- **1 point** for placing 7 or 8 out of the 9 students in the correct club using Method 2.

Rubric for Task 4d

Total points: **1 point**

- **1 point** for selecting "Yes."

Detailed Scoring Guide: Unit 2, Item 4e

Rubric for Task 4e

Total points: **2 points**

- **1 point** for selecting "Method 2."
- **1 point** for providing an appropriate explanation that supports use of Method 2 over Method 1.
  - The explanation could describe an advantage of using Method 2:
    - Method 2 would result in all students being placed into their first or second choice club (i.e., no placement in last choice club).
    - Method 2 would result in most students being placed into their first choice club (i.e., 7 out of 9 students).

    OR
  - The explanation could describe a disadvantage of using Method 1:
    - Method 1 would result in some students being placed in their last choice club (i.e., Luis, Neil).
    - Method 1 would result in fewer students being placed into their first choice club (i.e., 6 out of 9 with Method 1 versus 7 out of 9 with Method 2).
    - Method 1 would be disadvantageous for students lower on the list alphabetically. Students with names ranked earlier in the alphabet would be given priority to their top choice clubs whereas students ranked later in the alphabet would be more likely to get their last choice club. Method 2 does not necessarily have this issue.

    OR
  - The explanation could compare Method 1 with Method 2 using any of the criteria described above.

Detailed Scoring Guide: Unit 2, Item 4e

Sample Responses:

☐ Method 1

☑ Method 2

I believe this would make more kids happy because if they didn't get their first choice at least they get their second choice. Whereas method I some kids would have to get their third choice.

☐ Method 1

☑ Method 2

Students get chosen by random which increases the chance of students at the end of the alphabetical list of getting their first choice clubs. This ensures the selection would be fair.

☑ Method 1

☐ Method 2

Method I because most kids get their first or second choice not their third choice.

Unit 2, Item 5

5. Stacy runs a food bank.

- The types of cans donated to the food bank are vegetables, fruits, meat, and soup.
- Volunteers put the cans randomly on the storage shelves, wherever they find space.
- Stacy packs the cans into many food boxes a week.
- Each box has the same number and types of canned food.
- It takes Stacy a long time to find the cans she needs from the shelves.

Stacy wants to create a method for organizing the cans on the shelves.

a) What problem does Stacy hope to solve by creating a method for organizing the cans on the shelves?

Unit 2, Item 5

In parts (b) and (c), you will create a step-by-step method that can be used to *systematically* organize the cans that are currently on the shelves.

b) List one piece of information you need to know to create your method.

c) Create a method for Stacy to systematically organize the cans that are currently on the shelves. List your method as a series of steps.

d) A new type of food—condensed milk—is found on the shelves. Does your method from part (c) still work?

☐ Yes

☐ No

If yes, explain how the method would work. If no, explain how to modify your method.

Detailed Scoring Guide: Unit 2, Item 5a

Rubric for Task 5a

Total points: **1 point**

- **1 point** for providing an appropriate statement of the problem, which includes:
  - The shelves are not organized.

    OR
  - It is difficult or takes a long time to find the correct cans or to pack the food boxes.
  - **Note:** The student does not receive the point for a statement that solves the problem or does not describe the problem.

Sample Responses:

She hopes to solve the problem of the amount of time she wastes by simply trying find food for each of the boxes because they are all disorganized. She hopes to find the food faster and know where they are.

She hopes to find a faster way of distributing the food cans onto the shelf's.

Detailed Scoring Guide: Unit 2, Item 5b

Rubric for Task 5b

Total points: **1 point**

- **1 point** for identifying at least one variable related to the problem.
  - Appropriate variables include:
    - Types or categories of cans
    - Number of types of cans
    - Number of cans
    - Number of shelves
    - Amount of space on the shelves

Sample Responses:

To create my method, I needed to know what types of cans are donated to the food bank in order to stack all of them in order from what what type of can it is.

To create a method, Stacy needs to know where the shelves are

Detailed Scoring Guide: Unit 2, Item 5c

Rubric for Task 5c

Total points: **2 points**

- **1 point** for including a step about grouping the cans by type (e.g., *"sort the cans by fruits, vegetables, meat, and soups"*).
  - If the student groups the cans by other characteristics (e.g., alphabetically), this is acceptable as long as it would allow the cans to be easily found. Sorting by color or size would not qualify.
- **1 point** for including a step about moving the cans into designated locations (i.e., space for each food category) on the shelves (e.g., *"put cans in their correct shelves"*).

Note: The student may meet both criteria in one step (e.g., *"sort each can on the shelf labeled for that type of food"*) and receive both points.

Note: If the student includes additional steps, these are not scored.

Sample Responses:

1. Get four shelves.
2. For each shelve, write the name vegetables, fruits, meat and soup.
3. Take a can one at a time and place it where it actually belongs.
4. Take a box at a time and place the same number of vegetables, fruits, meat and soup inside.

Detailed Scoring Guide: Unit 2, Item 5c

Sample Responses continued:

She can place all of the fruits in one shelve the soups in another shelve and the meats in another shelve. She needs to sort them out differently.

- Label each shelf with a type of food.
- Sort the food, so that each food is on the shelf with a label.

Vegetables should all be in one box. Same with fruits, meat, and soup.

Organize them by what they are. Volunteers should put them in order.

Detailed Scoring Guide: Unit 2, Item 5d

Rubric for Task 5d

Total points: **1 point**

- **1 point** for providing an appropriate explanation of how the method described in Task 5c would apply for the new type of food OR for providing an appropriate modification if the method described Task 5c would not apply for the new type of food.
  - The student selects "Yes" (or stating that the method would work) AND provides a description that makes it clear how the new type of food is sorted based on the method from Task 5c.

    OR
  - The student selects "No" (or stating that the method would not work) AND provides a description that makes it clear how to modify the method from Task 5c in order to add a new type of food.

Sample Responses:

☑ Yes
☐ No

It would work because these kinds of cans would just have to be placed on a different shelf from the others. It would just be a set itself on its own shelf.

Detailed Scoring Guide: Unit 2, Item 5d

Sample Responses continued:

☐ Yes

☑ No

My method would not work because there is no shelf for condensed milk, only for veggies, fruits, meats, and soups. Since, there is only one can of condensed milk, I would move some of the cans over, let's say the soup shelf, and add a label for the condensed milk and put the milk can there.

☐ Yes

☑ No

I did not include another group in my method. I only specified vegetables, fruits, meat and soup.

SRI International

Center for Technology in Learning

Unit 3 Rubric Overview

Unit 3, Item 1

1. **The technology class is in charge of creating a website for all the clubs offered at the school. There are 50 clubs, and each will have its own web page. Each club's web page will contain different content but will have the SAME style.**

   To maintain the **SAME** style for all 50 web pages, should the pages be designed using an **inline** style, an **internal** style sheet, or an **external** style sheet?

   - ☐ Inline style (in the body of the HTML page)
   - ☐ Internal style sheet (in the header of the HTML page)
   - ☐ External style sheet (linked to from the HTML page)

Detailed Scoring Guide: Unit 3, Item 1

Rubric for Task 1

Total points: **1 point**

- **1 point** for selecting:
  - ☐ Inline style (in the body of the HTML page)
  - ☐ Internal style sheet (in the header of the HTML page)
  - ☑ External style sheet (linked to from the HTML page)

Unit 3, Item 2

2. Zoe wants to make a fan club website for a local band. She wants the website to have information about the band as well as information about the fan club.

a) Zoe wants a list of 4 requirements to give to a web design team who will create her website. Zoe has provided the first requirement. List 3 more requirements to give to the web design team.

Be sure that each requirement describes **specific content** (**WHAT** information is provided) and **specific design** (**HOW** the information should look) for Zoe's website.

Requirement 1	A list of shows, including the date and place for each show, with past shows in gray and upcoming shows in green.
Requirement 2	
Requirement 3	
Requirement 4	

Unit 3, Item 2

b) Sketch out **1 page** of Zoe's website. Use **one** of the requirements you listed in part (a) in your sketch.

- In your sketch, include pictures and words to show the requirement.
- You may describe in words any formatting that is not clear from the picture.

Select the requirement chosen to be included in the sketch:

- ☐ Requirement 2
- ☐ Requirement 3
- ☐ Requirement 4

Detailed Scoring Guide: Unit 3, Item 2a

Rubric for Task 2a

Total points: **3 points**

- **1 point** for providing a requirement that describes specific content AND specific design elements for Requirement 2.
  - **Note:** The student may write the requirements in HTML and/or CSS to receive the point as long as both content and design elements are present.
  - **Examples of content elements:**
    - Band information (e.g., band name, band members' biographies)
    - Fan club information (e.g., list of fan club members, information to join)
    - Images relating to band or fan club (e.g., band group photos, fan profile pictures)
    - Widgets (e.g., music player, video player, chat box, social media streams, calendar)
    - Security features (e.g., login form, password, username)
  - **Examples of design elements:**
    - Color information (e.g., blue text, black background, green links)
    - Font information (e.g., bold text, heading 1 text, cursive font)
    - Formatting (e.g., lists, tables, centered text)
    - Layout components (e.g., title, heading, main content, banner, footer, left column, sections)
    - Positioning of content (e.g., in middle, at the top, centered, next to, in grids)
    - Indication that specific content would appear on its own web page

Detailed Scoring Guide: Unit 3, Item 2a

- **Examples of elements that may be content or design elements, depending on context:**
  - Images – If images are used to provide information about the band or fan club, they are content elements (e.g., images of album covers, pictures of band posters). If they are used for aesthetics or layout purposes, they are design elements (e.g., band logo as default user image, repeat images of music notes in the background).
  - Paragraphs – Paragraphs may be considered content elements if they are paired with a design element (e.g. *"The layout would include several paragraphs in the middle of the page"*). They may be considered design elements if they are paired with a content element (e.g. *"Paragraphs that describe the history of the band"*).
  - Menus or Navigation Bars – Features such as menus or navigation bars may be considered content elements if they are paired with a design element (e.g. *"A blue navigation bar at the top"*). They may be considered design elements if they are paired with a content element (e.g. *"Menu of the band's concert dates"*).
  - Navigation links – Navigation links may be considered content elements if they are paired with a design element (e.g., *"Include links at the top of the page.")* They may be considered a design element if they are paired with a content element (e.g., *"Include a link to a page about the history of the band.")*

- **1 point** for providing a requirement that describes specific content AND specific design elements for Requirement 3. See the rubric for Requirement 2 above for examples.
- **1 point** for providing a requirement that describes specific content AND specific design elements for Requirement 4. See the rubric for Requirement 2 above for examples.

Detailed Scoring Guide: Unit 3, Item 2a

Sample Responses:

Requirement 2	An about us page, where each band member has a profile so fans can find out more about the band members. A picture of each member should also be included. The band member's name should be in dark green, and the description in light gray
Requirement 3	A videos page, where users can watch videos of the band's performances. Above each video, it should have the title of the video in green and a short description in gray.
Requirement 4	A clean home page that makes it easy to navigate to other pages on the site. Links to other pages should have a gray background, with a green font.

Detailed Scoring Guide: Unit 3, Item 2a

Sample Responses:

Requirement 2	Name in big font
Requirement 3	Information about the band
Requirement 4	Menu that links to other pages on the website (internal navigation links)

Requirement 2	A different page for the band and a different page for the fan club.
Requirement 3	A picture gallery of the band and video clips of their performances
Requirement 4	A link that leads to another page that sells fan accessories one could wear. Clothing, collectables, etc. should each have their own page.

Detailed Scoring Guide: Unit 3, Item 2b

Rubric for Task 2b

Total points: **2 points**

- The selection of the requirement from Task 2a is not scored.
  - **Note:** If the student does not select a requirement to sketch, the student can only receive full credit (2 points) for the sketch if the sketch clearly shows both content AND design elements from a **single** requirement. The student cannot receive partial credit for having only a content element or a design element as it is not clear that the student is attempting to sketch one of the three requirements. See Sample Response 2 below for an example.
- **1 point** for including the content element of the requirement chosen from Task 2a in the sketch.
  - The content element shown in the sketch must clearly be the one described in the chosen requirement. If the student shows a different content element, the student does not receive the point.
  - If the chosen requirement from Task 2a describes a content element but not a design element, the student can still receive the point for clearly including the content element in the sketch.
  - **Note:** If the chosen requirement from Task 2a does not describe a content element (i.e., it was incorrect), the student does not receive this point.

Detailed Scoring Guide: Unit 3, Item 2b

- **1 point** for including the design element of the requirement chosen from Task 2a in the sketch.
  - The design element shown in the sketch must clearly be the one described in the chosen requirement. If the student shows a different design element, the student does not receive the point.
  - If the chosen requirement from Task 2a describes a design element but not a content element, the student can still receive the point for clearly including the design element in the sketch.
  - **Note:** If the chosen requirement from Task 2a does not describe a design element (i.e., it was incorrect), the student does not receive this point.
- **Note:** If the sketch is HTML code and shows both the content element and design element, the student may receive 2 points.

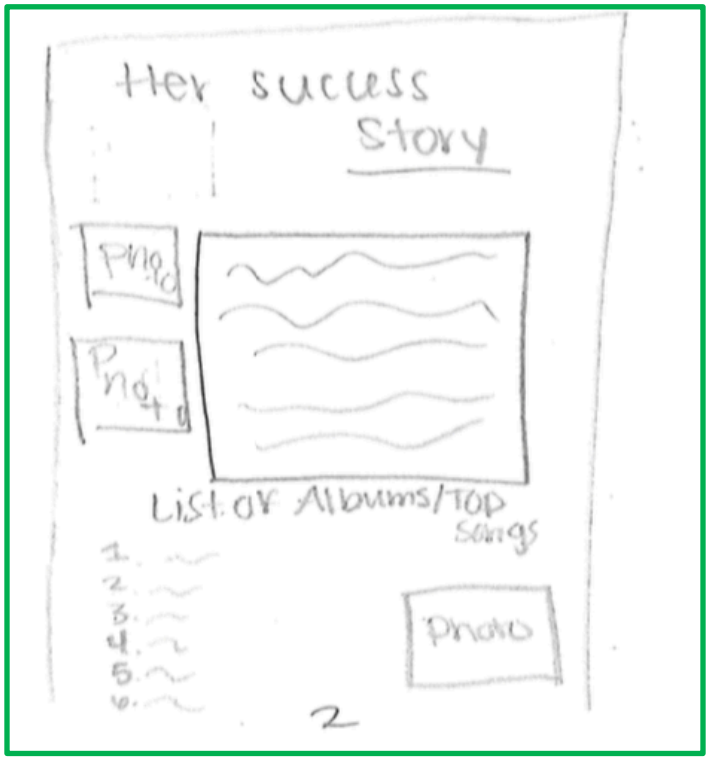
Detailed Scoring Guide: Unit 3, Item 2b

Sample Responses:

Requirement 2	Biography about the band with pictures next to it
Requirement 3	A list of albums/top songs
Requirement 4	The title at the top in big font and letters in orange

Task 2b:

- ☐ Requirement 2
- ☑ Requirement 3
- ☐ Requirement 4



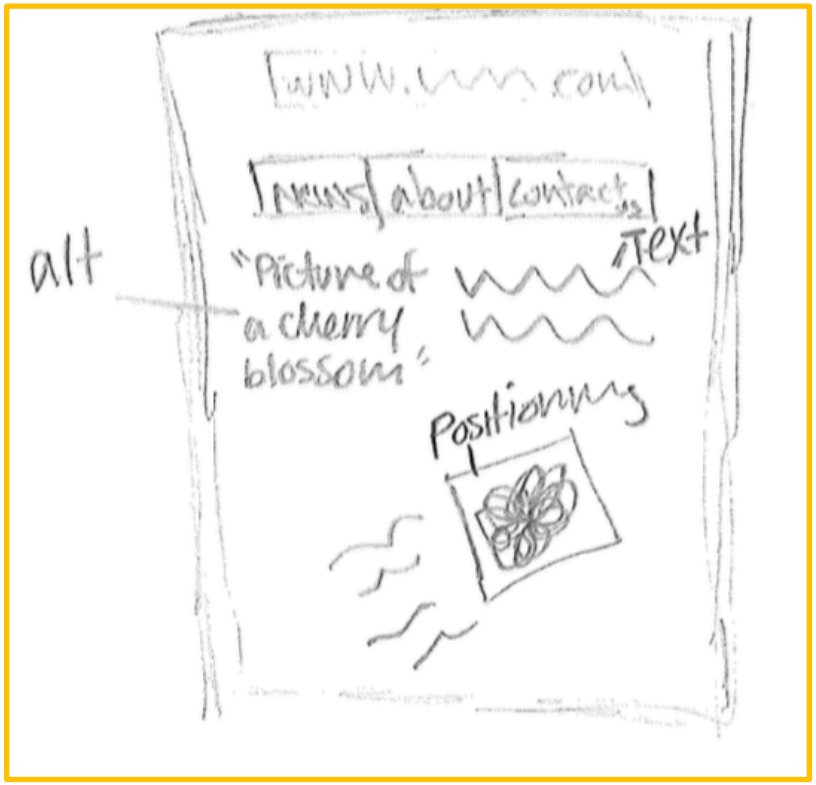
Detailed Scoring Guide: Unit 3, Item 2b

Sample Responses:

Requirement 2	Cool layout
Requirement 3	Music player with band's logo on it
Requirement 4	Short paragraph about the band

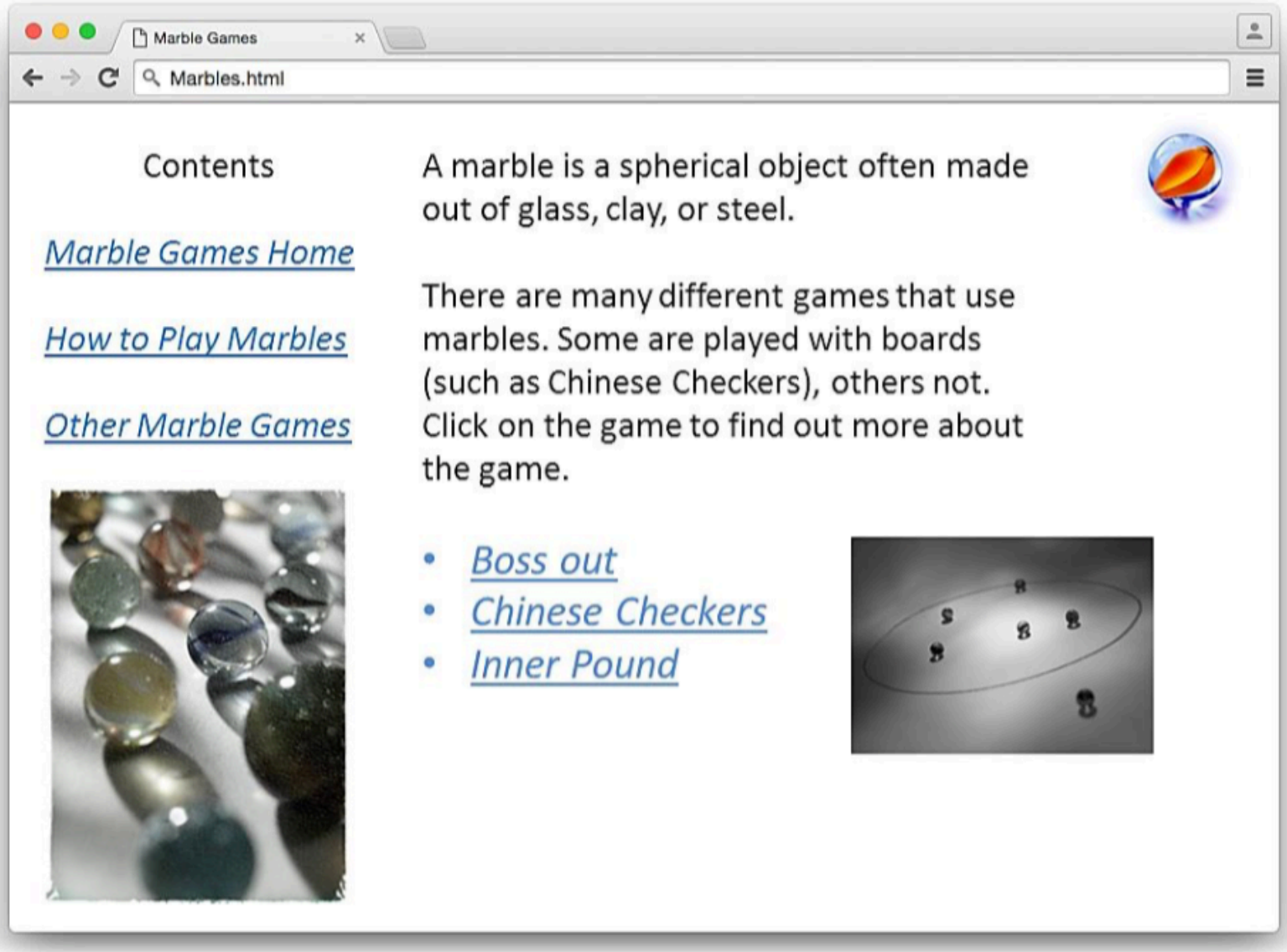
Task 2b:

- ☑ Requirement 2
- ☐ Requirement 3
- ☐ Requirement 4



Unit 3, Item 3

3. Below is a picture of a web page. Use this web page to complete the tasks below.



Unit 3, Item 3

For each element listed below, select **"Yes"** if the element is included on the web page shown or **"No"** if the element is not included.

Element	Included?
a) A web page heading that reads "Marble Games"	☐ Yes ☐ No
b) A web page title that reads "Marble Games"	☐ Yes ☐ No
c) An unordered list of marble games	☐ Yes ☐ No
d) A navigation bar at the top of the page	☐ Yes ☐ No

Detailed Scoring Guide: Unit 3, Item 3

Rubric for Task 3

Total points: **2 points**

- **0.5 points** for each correct identification of whether the element is included on the web page:

Element	Included?
a) A web page heading that reads "Marble Games"	☐ Yes ☑ No
b) A web page title that reads "Marble Games"	☑ Yes ☐ No
c) An unordered list of marble games	☑ Yes ☐ No
d) A navigation bar at the top of the page	☐ Yes ☑ No

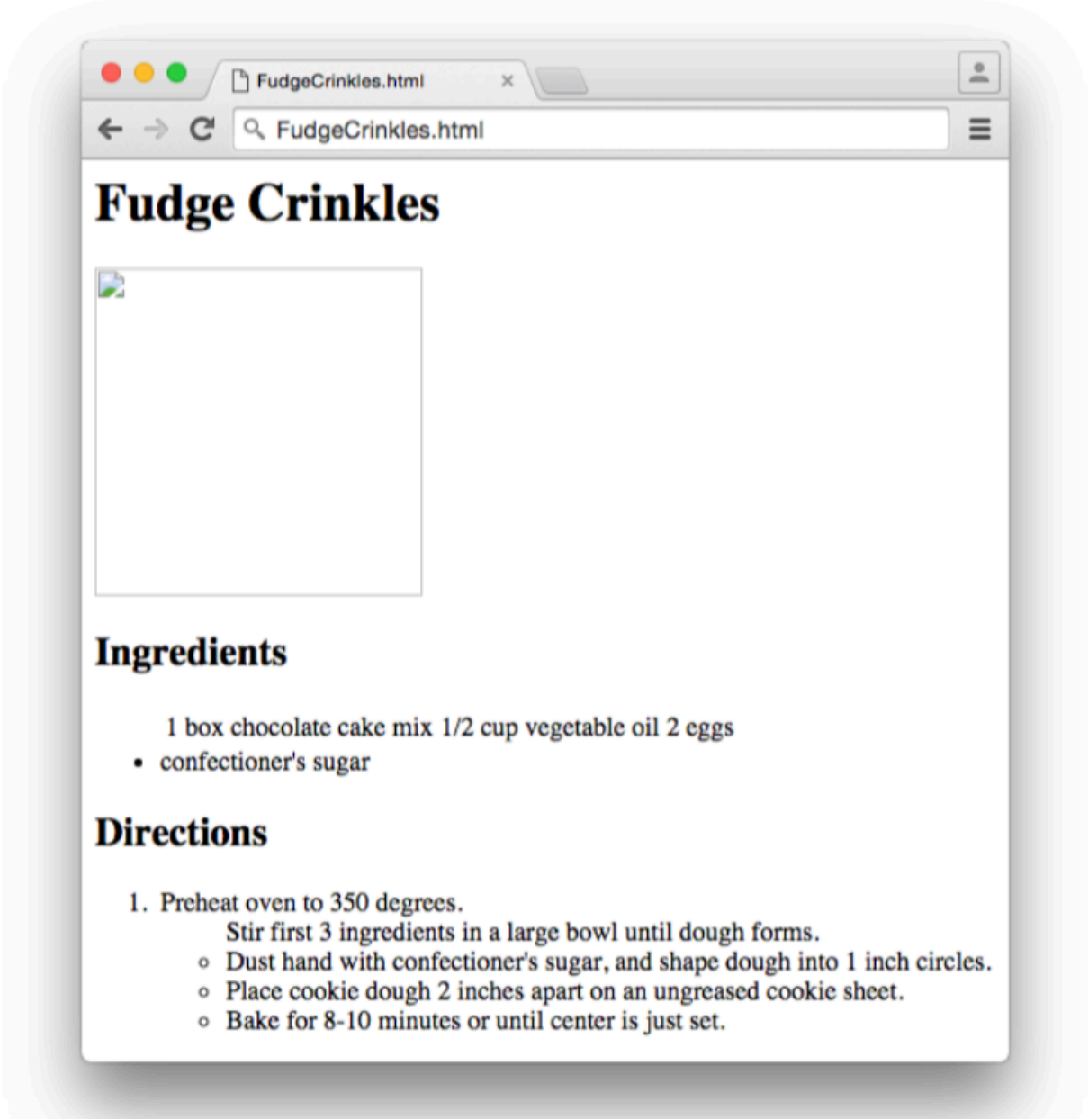
Unit 3, Item 4

4. **Felipe created a website to display his favorite cookie recipes. Each page on the website will contain a cookie recipe. Each page must have:**

    - The cookie name
    - A picture of the cookie
    - A heading for the ingredients along with a **bulleted list** of the ingredients
    - A **numbered list** of steps to make the cookies

Unit 3, Item 4

His first attempt at coding the web page for the Fudge Crinkles recipe resulted in this:



Unit 3, Item 4

a) Circle **one** error on the web page below. This will be **Error 1**.

Fudge Crinkles

Ingredients

1 box chocolate cake mix 1/2 cup vegetable oil 2 eggs

- confectioner's sugar

Directions

1. Preheat oven to 350 degrees.
   Stir first 3 ingredients in a large bowl until dough forms.
   - Dust hand with confectioner's sugar, and shape dough into 1 inch circles.
   - Place cookie dough 2 inches apart on an ungreased cookie sheet.
   - Bake for 8-10 minutes or until center is just set.

Explain why you think this is an error.

Unit 3, Item 4

b) Circle **one** error on the web page below that is **different** from part (a). This will be **Error 2**.

Fudge Crinkles

Ingredients

1 box chocolate cake mix 1/2 cup vegetable oil 2 eggs

- confectioner's sugar

Directions

1. Preheat oven to 350 degrees.
   Stir first 3 ingredients in a large bowl until dough forms.
   - Dust hand with confectioner's sugar, and shape dough into 1 inch circles.
   - Place cookie dough 2 inches apart on an ungreased cookie sheet.
   - Bake for 8-10 minutes or until center is just set.

Explain why you think this is an error.

Unit 3, Item 4

c) Circle the corresponding **Error 1** from part (a) on the HTML code below.

```
<html>
    <body>
        <h1>Fudge Crinkles</h1>
        <img src="FudgeCrinkles.html" width="200"/>
        <h2>Ingredients</h2>
        <ul>
            <table>
                <tr>
                    <td>1 box chocolate cake mix</td>
                    <td>1/2 cup vegetable oil</td>
                    <td>2 eggs</td>
                </tr>
            </table>
            <li>confectioner's sugar</li>
        </ul>
        <h2>Directions</h2>
        <ol>
            <li>Preheat oven to 350 degrees.</li>
            <ul>Stir first 3 ingredients in a large bowl until dough forms.</li>
            <li>Dust hand with confectioner's sugar, and shape dough into 1 inch circles.</li>
            <li>Place cookie dough 2 inches apart on an ungreased cookie sheet.</li>
            <li>Bake for 8-10 minutes or until center is just set.</li>
        </ol>
    </body>
</html>
```

Describe how you would fix the error in the code.

Unit 3, Item 4

d) Circle the corresponding **Error 2** from part (b) on the HTML code below.

```
<html>
    <body>
        <h1>Fudge Crinkles</h1>
        <img src="FudgeCrinkles.html" width="200"/>
        <h2>Ingredients</h2>
        <ul>
            <table>
                <tr>
                    <td>1 box chocolate cake mix</td>
                    <td>1/2 cup vegetable oil</td>
                    <td>2 eggs</td>
                </tr>
            </table>
            <li>confectioner's sugar</li>
        </ul>
        <h2>Directions</h2>
        <ol>
            <li>Preheat oven to 350 degrees.</li>
            <ul>Stir first 3 ingredients in a large bowl until dough forms.</li>
            <li>Dust hand with confectioner's sugar, and shape dough into 1 inch circles.</li>
            <li>Place cookie dough 2 inches apart on an ungreased cookie sheet.</li>
            <li>Bake for 8-10 minutes or until center is just set.</li>
        </ol>
    </body>
</html>
```

Describe how you would fix the error in the code.

Detailed Scoring Guide: Unit 3, Item 4a & 4b

Errors on Web Page

Use this key to score Tasks 4a and 4b. There are a total of 3 possible errors. Errors are in red rectangles below:

Fudge Crinkles

(1)

Ingredients

1 box chocolate cake mix 1/2 cup vegetable oil 2 eggs (2)

- confectioner's sugar

Directions

1. Preheat oven to 350 degrees.

(3)

Stir first 3 ingredients in a large bowl until dough forms.

- Dust hand with confectioner's sugar, and shape dough into 1 inch circles.
- Place cookie dough 2 inches apart on an ungreased cookie sheet.
- Bake for 8-10 minutes or until center is just set.

Detailed Scoring Guide: Unit 3, Item 4a & 4b

Rubric for Task 4a

Total points: **2 points**

- **1 point** for identifying an appropriate error on the web page (Error 1). See the *Errors on Web Page* section above for a key to possible errors.
  - **Note:** As long as the student circles part of the error AND does not include another error, the student may receive the point.
    - The student does not need to circle the complete error (i.e., from *"1 box chocolate…"* to *"…2 eggs,"* from *"Stir first 3…"* to *"…is just set"*) in order to receive the point.
    - The student may circle a section that is not an error (e.g., *"Ingredients,"* *"Directions"*) as long as the area circled contains part of an appropriate error AND does not include a different error.

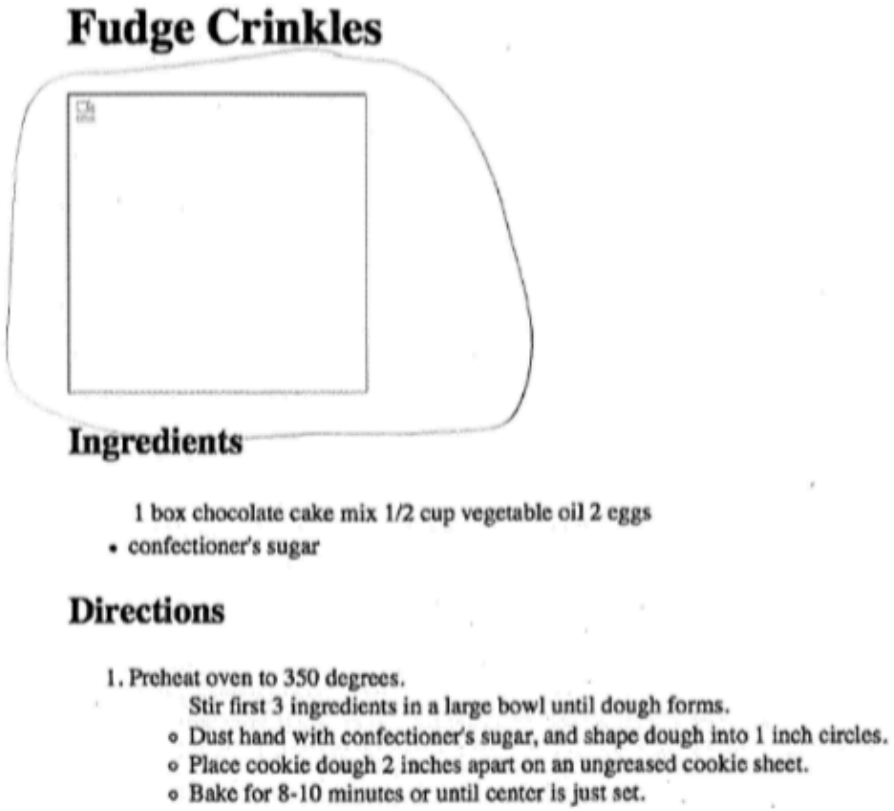
Detailed Scoring Guide: Unit 3, Item 4a & 4b

- **1 point** for providing an appropriate explanation for why the identified Error 1 is an error.
  - An appropriate explanation should be relevant to the identified error and should discuss how the error:
    - Does not meet the requirement for the part of the web page identified as an error.
      - **Note:** If the student identifies an incorrect requirement (e.g., the student states that the Directions list has an error because it is not a bulleted list instead of the error being that directions are not numbered), then the student does not receive the point.

      OR
    - Does not appear correct.
      - **Note:** If the student simply states that the error does appear correct without an indication of why that is the case (e.g., *"The ingredients don't look right," "The directions look weird"*), the student does not receive the point.
    - **Note:** If the student only indicates that there is an error in the HTML code without explaining what may be wrong with the HTML code, the student does not receive the point.
    - **Note:** If the student does not identify an error, the student may still receive the point for the explanation as long as the explanation makes it clear which error the student is discussing.

Detailed Scoring Guide: Unit 3, Item 4a & 4b

Sample Responses:



Fudge Crinkles

Ingredients

1 box chocolate cake mix 1/2 cup vegetable oil 2 eggs
- confectioner's sugar

Directions

1. Preheat oven to 350 degrees.
   Stir first 3 ingredients in a large bowl until dough forms.
   - Dust hand with confectioner's sugar, and shape dough into 1 inch circles.
   - Place cookie dough 2 inches apart on an ungreased cookie sheet.
   - Bake for 8-10 minutes or until center is just set.

The image was not called upon properly, and therefore does not show up. The syntax for calling an image was correct because the program knows there should be an image in that spot, but the name of the image file was not typed properly because it does not call any specific images.

Detailed Scoring Guide: Unit 3, Item 4a & 4b

Sample Responses:

Fudge Crinkles

Ingredients

no bullet

no bullet

no bullet

1 box chocolate cake mix 1/2 cup vegetable oil 2 eggs

- confectioner's sugar

Directions

1. Preheat oven to 350 degrees.
   Stir first 3 ingredients in a large bowl until dough forms.
   - Dust hand with confectioner's sugar, and shape dough into 1 inch circles.
   - Place cookie dough 2 inches apart on an ungreased cookie sheet.
   - Bake for 8-10 minutes or until center is just set.

I think this is an error because a bulleted list is supposed to have a bullet point at each item. In this section, 3 items that are supposed to be in a bulleted list are all on one line.

Detailed Scoring Guide: Unit 3, Item 4a & 4b

Sample Responses:

Fudge Crinkles

Ingredients

1 box chocolate cake mix 1/2 cup vegetable oil 2 eggs

- confectioner's sugar

Directions

1. Preheat oven to 350 degrees.
   Stir first 3 ingredients in a large bowl until dough forms.
   - Dust hand with confectioner's sugar, and shape dough into 1 inch circles.
   - Place cookie dough 2 inches apart on an ungreased cookie sheet.
   - Bake for 8-10 minutes or until center is just set.

Because for directions he still has bulleted list instead of numbered. He is suppose to use the <ol> tag.

Detailed Scoring Guide: Unit 3, Item 4a & 4b

Sample Responses:

Fudge Crinkles

Ingredients

1 box chocolate cake mix 1/2 cup vegetable oil 2 eggs

- confectioner's sugar

Directions

1. Preheat oven to 350 degrees.
   - Stir first 3 ingredients in a large bowl until dough forms.
   - Dust hand with confectioner's sugar, and shape dough into 1 inch circles.
   - Place cookie dough 2 inches apart on an ungreased cookie sheet.
   - Bake for 8-10 minutes or until center is just set.

This is an error because he did not put a bullet point for this ingredient. He could have used an ordered list.

Detailed Scoring Guide: Unit 3, Item 4a & 4b

Sample Responses:

Fudge Crinkles

Ingredients

- box chocolate cake mix 1/2 cup vegetable oil 2 eggs
- confectioner's sugar

Directions

1. Preheat oven to 350 degrees.
   - Stir first 3 ingredients in a large bowl until dough forms.
   - Dust hand with confectioner's sugar, and shape dough into 1 inch circles.
   - Place cookie dough 2 inches apart on an ungreased cookie sheet.
   - Bake for 8-10 minutes or until center is just set.

There are missing bullet points.

Detailed Scoring Guide: Unit 3, Item 4c & 4d

Errors in HTML Code

Use this key to score Tasks 4c and 4d. There are a total of 3 possible errors. Each number corresponds to the error number from the *Errors on Web Page* key above. Errors are in red rectangles below:

```
<html>
    <body>
        <h1>Fudge Crinkles</h1>
        <img src="FudgeCrinkles.html" width="200"/> (1)
        <h2>Ingredients</h2>
        <ul>
            <table>                                          (2)
                <tr>
                    <td>1 box chocolate cake mix</td>
                    <td>1/2 cup vegetable oil</td>
                    <td>2 eggs</td>
                </tr>
            </table>
            <li>confectioner's sugar</li>
        </ul>
        <h2>Directions</h2>
        <ol>
            <li>Preheat oven to 350 degrees.</li>
            <ul>Stir first 3 ingredients in a large bowl until dough forms.</li> (3)
            <li>Dust hand with confectioner's sugar, and shape dough into 1 inch circles.</li>
            <li>Place cookie dough 2 inches apart on an ungreased cookie sheet.</li>
            <li>Bake for 8-10 minutes or until center is just set.</li>
        </ol>
    </body>
</html>
```

Detailed Scoring Guide: Unit 3, Item 4c & 4d

Rubric for Task 4c

Total points: **2 points**

- **1 point** for identifying the code(s) associated with the student's Error 1 from Task 4a. See the *Errors in HTML Code* section above for a key to possible errors.
  - **Note:** As long as the student circles part of the error AND does not include another error, the student may receive the point.
    - The student does not need to circle the complete error (i.e., from "*<table>…*" to "*…</table>*") in order to receive the point.
    - The student may circle a section that is not an error (e.g., from "*<h2>Directions…*" to "*…
*") as long as the area circled contains part of an appropriate error AND does not include a different error.

Detailed Scoring Guide: Unit 3, Item 4c & 4d

- **1 point** for providing an appropriate solution for how to fix the error in the identified code.
  - **Note:** This point for the solution is based on what the student identified in the code on this page. If the student does not identify an error in the code, the student may still receive the point for the solution as long as it is clear which error the student is describing AND the error corresponds to Error 1 from Task 4a.
  - An appropriate solution for how to fix the error should be relevant to the identified error and should include:
    - The correct rewritten codes.

      OR
    - A step-by-step procedure on how to fix the error.

      OR
    - The codes to be replaced.

Detailed Scoring Guide: Unit 3, Item 4c & 4d

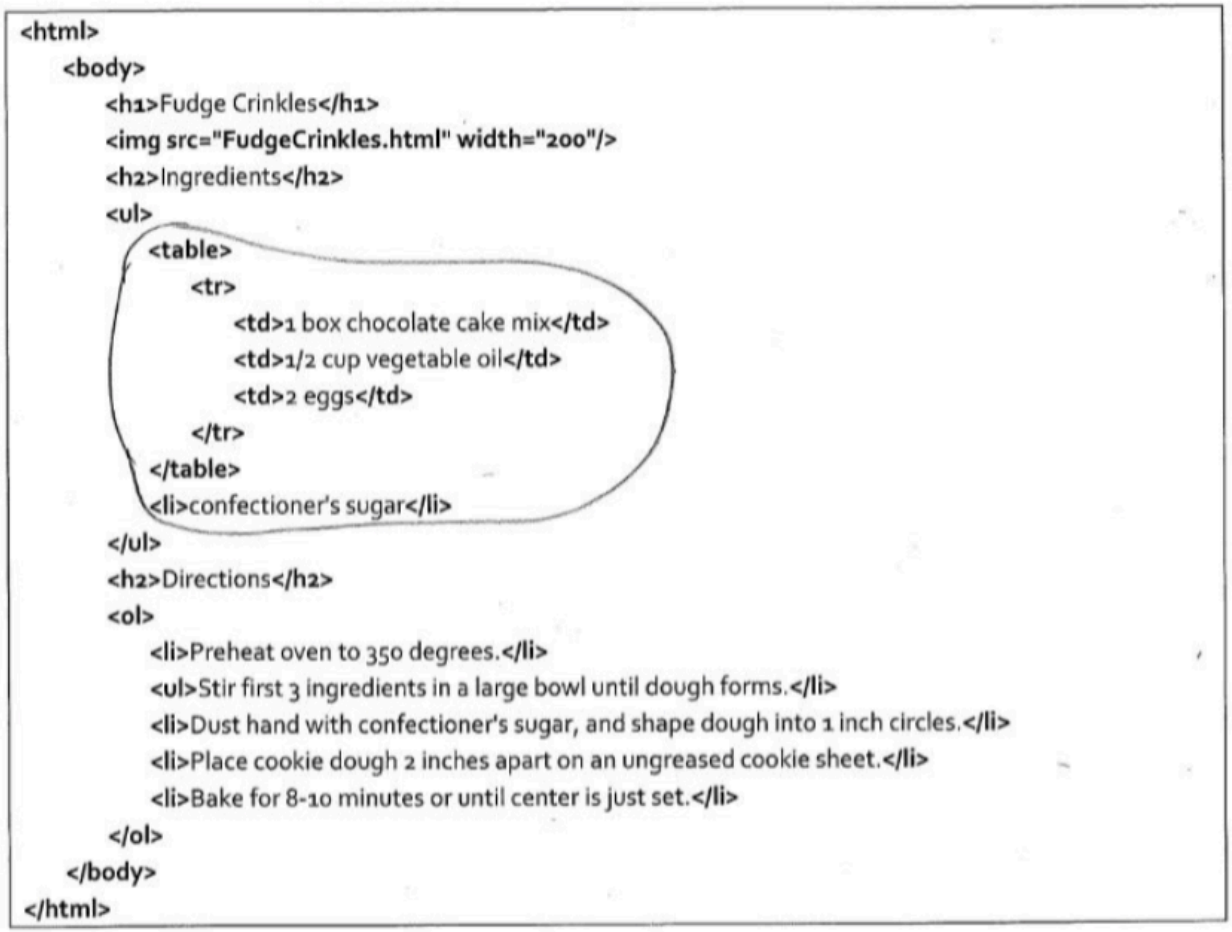
Sample Responses:

```
<html>
    <body>
        <h1>Fudge Crinkles</h1>
        <img src="FudgeCrinkles.html" width="200"/>
        <h2>Ingredients</h2>
        <ul>
            <table>
                <tr>
                    <td>1 box chocolate cake mix</td>
                    <td>1/2 cup vegetable oil</td>
                    <td>2 eggs</td>
                </tr>
            </table>
            <li>confectioner's sugar</li>
        </ul>
        <h2>Directions</h2>
        <ol>
            <li>Preheat oven to 350 degrees.</li>
            <ul>Stir first 3 ingredients in a large bowl until dough forms.</li>
            <li>Dust hand with confectioner's sugar, and shape dough into 1 inch circles.</li>
            <li>Place cookie dough 2 inches apart on an ungreased cookie sheet.</li>
            <li>Bake for 8-10 minutes or until center is just set.</li>
        </ol>
    </body>
</html>
```

I would change ".html" to ".png" or ".jpg" and if that fails I would see if the picture is in the correct folder.

Detailed Scoring Guide: Unit 3, Item 4c & 4d

Sample Responses:



```
<html>
    <body>
        <h1>Fudge Crinkles</h1>
        <img src="FudgeCrinkles.html" width="200"/>
        <h2>Ingredients</h2>
        <ul>
            <table>
                <tr>
                    <td>1 box chocolate cake mix</td>
                    <td>1/2 cup vegetable oil</td>
                    <td>2 eggs</td>
                </tr>
            </table>
            <li>confectioner's sugar</li>
        </ul>
        <h2>Directions</h2>
        <ol>
            <li>Preheat oven to 350 degrees.</li>
            <ul>Stir first 3 ingredients in a large bowl until dough forms.</li>
            <li>Dust hand with confectioner's sugar, and shape dough into 1 inch circles.</li>
            <li>Place cookie dough 2 inches apart on an ungreased cookie sheet.</li>
            <li>Bake for 8-10 minutes or until center is just set.</li>
        </ol>
    </body>
</html>
```

He did not have to make a table, to fix this, he must remove all the <td> tags and replace it with <li> and the </td> tags with . He must also remove the <table>, <tr>, </table>, </tr>, tags.

Detailed Scoring Guide: Unit 3, Item 4c & 4d

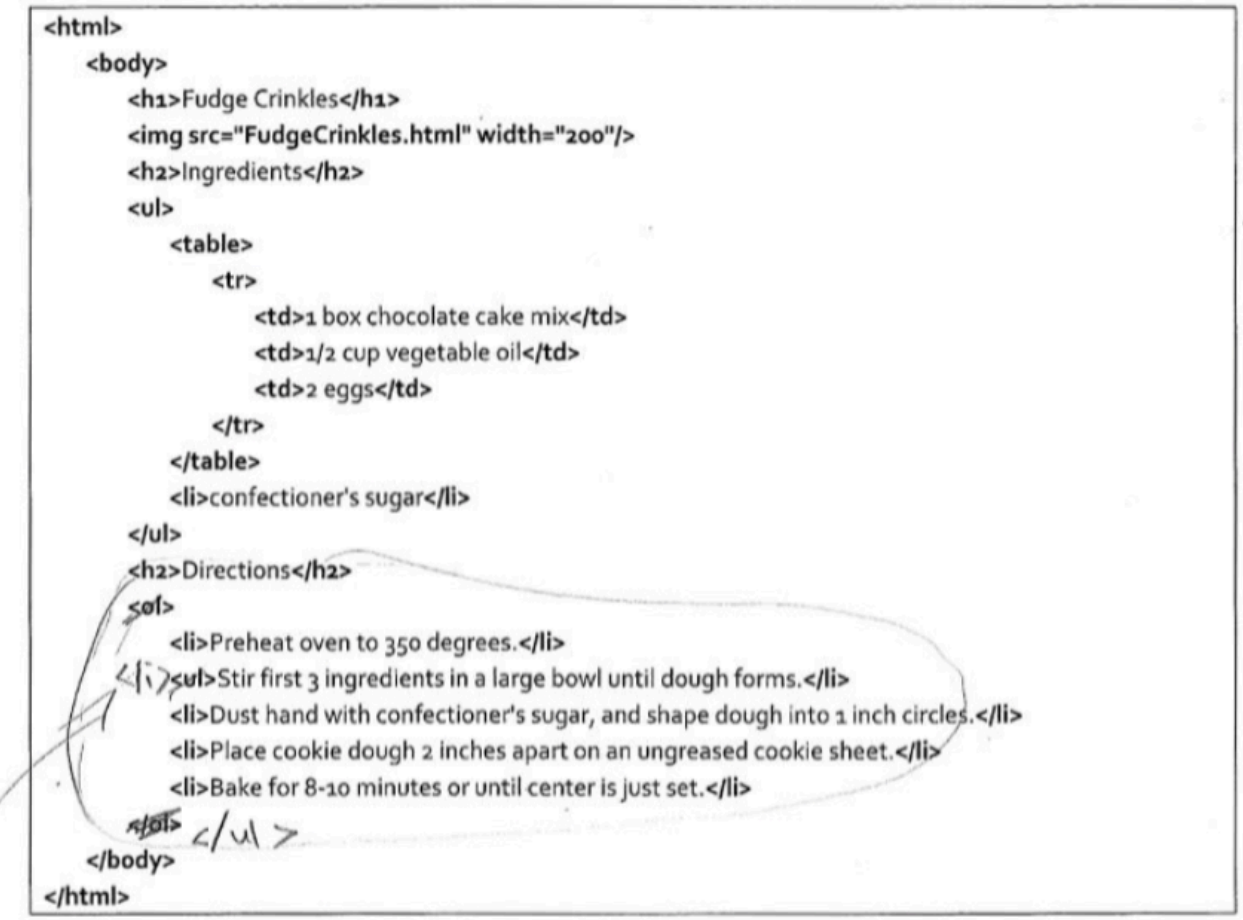
Sample Responses:

```
<html>
    <body>
        <h1>Fudge Crinkles</h1>
        <img src="FudgeCrinkles.html" width="200"/>
        <h2>Ingredients</h2>
        <ul>
            <table>
                <tr>
                    <td>1 box chocolate cake mix</td>
                    <td>1/2 cup vegetable oil</td>
                    <td>2 eggs</td>
                </tr>
            </table>
            <li>confectioner's sugar</li>
        </ul>
        <h2>Directions</h2>
        <ol>
            <li>Preheat oven to 350 degrees.</li>
            <ul>Stir first 3 ingredients in a large bowl until dough forms.</li>
            <li>Dust hand with confectioner's sugar, and shape dough into 1 inch circles.</li>
            <li>Place cookie dough 2 inches apart on an ungreased cookie sheet.</li>
            <li>Bake for 8-10 minutes or until center is just set.</li>
        </ol>
    </body>
</html>
```

I would fix the error in the code by changing <ul> to <li> because it affected the rest of the code, causing it to be a bulleted list instead of a numbered list.

Detailed Scoring Guide: Unit 3, Item 4c & 4d

Sample Responses:



```
<html>
    <body>
        <h1>Fudge Crinkles</h1>
        <img src="FudgeCrinkles.html" width="200"/>
        <h2>Ingredients</h2>
        <ul>
            <table>
                <tr>
                    <td>1 box chocolate cake mix</td>
                    <td>1/2 cup vegetable oil</td>
                    <td>2 eggs</td>
                </tr>
            </table>
            <li>confectioner's sugar</li>
        </ul>
        <h2>Directions</h2>
        <ol>
            <li>Preheat oven to 350 degrees.</li>
            <ul>Stir first 3 ingredients in a large bowl until dough forms.</li>
            <li>Dust hand with confectioner's sugar, and shape dough into 1 inch circles.</li>
            <li>Place cookie dough 2 inches apart on an ungreased cookie sheet.</li>
            <li>Bake for 8-10 minutes or until center is just set.</li>
        </ol> </ul>
    </body>
</html>
```

Remove the <ol> and tags and add a tag. Change the <ul> tag to the <li> tag.

Unit 3, Item 5

5. Below are codes for a CSS file and an HTML file that are in the same folder directory.

CSS Code (style.css)

```
body {
    background-color: gray;
}
h1 {
    color: blue;
}
p {
    color: yellow;
}
```

Unit 3, Item 5

HTML Code (astronomy.html)

```
<html>
    <head>
        <title>Space, the New Frontier</title>
        <link rel="stylesheet" type="text/css" href="style.css">
        <style type="text/css">
            h1 {
                color: green;
            }
        </style>
    </head>
    <body>
        <h1>To Pluto and Beyond</h1>
        <p  style="color: purple;">
            The New Horizons spacecraft sent back images of Pluto!
        </p>
        <img src="pluto.jpg" />
        <p >
            The spacecraft will continue its journey beyond Pluto.
        </p>
    </body>
</html>
```

Use the CSS and HTML codes shown above to answer the following questions.

Unit 3, Item 5

a) What color would the text "The New Horizons spacecraft sent back images of Pluto!" appear as on the web page?

_____

b) What color would the text "The spacecraft will continue its journey beyond Pluto" appear as on the web page?

_____

c) What color would the text "To Pluto and Beyond" appear as on the web page?

_____

d) Explain why the text "To Pluto and Beyond" appears as the color you stated in part (c).

Detailed Scoring Guide: Unit 3, Items 5a, 5b, & 5c

Rubric for Task 5a

Total points: **1 point**

- **1 point** for answering "purple" for the "The New Horizons spacecraft sent back images of Pluto!" text color.

Rubric for Task 5b

Total points: **1 point**

- **1 point** for answering "yellow" for the "The spacecraft will continue its journey beyond Pluto" text color.

Rubric for Task 5c

Total points: **1 point**

- **1 point** for answering "green" for the "To Pluto and Beyond" text color.

Detailed Scoring Guide: Unit 3, Item 5d

Rubric for Task 5d

Total points: **1 point**

- **1 point** for providing an appropriate explanation that indicates that the text "To Pluto and Beyond" uses the *h1* (heading 1) style defined in the internal style sheet.
  - A minimal appropriate explanation would discuss inheriting the color from the internal sheet style (e.g., *"It gets the color from the style in the head of the HTML file," "It's green because of the h1 style at the top* [Note: It's clear 'style at the top' here refers to the HTML top because green appears in only the HTML code]*"*).
    - **Note:** The student should refer to the internal style sheet in some manner (e.g., "internal style," "style at the top of HTML page," "style tag area," "style in the head") to receive the point.
      - If the student does not name the internal style sheet, it should be clear that the student is referring to the *h1* selector from the internal style sheet (in the HTML file) instead of the external style sheet (from the CSS file) when determining color inheritance (e.g., *"It's green because h1 is defined again in the HTML code," "There are two h1s with colors, but it's green because it comes after the first"*).
    - **Note:** The student does not have to explicitly mention the *h1* tag or style selector.
  - Additional examples of appropriate explanations:
    - *"The text is in a <h1> tag, so I look for CSS that defines h1, which I see in the internal style sheet in the <head> section."*
    - *"The text should be blue because of the external CSS file, but because it's defined again in the HTML file, this overwrites it to green."*

Detailed Scoring Guide: Unit 3, Item 5d

Sample Responses:

The internal style override the external style so the h1 would follow the h1 style in the internals.

The reason why is because in the HTML code it says that h1 will be green. To Pluto and Beyond is in the H1, while everything else is in p is set to be yellow, so it is green because it sets H1 to color green and is in the h1 tag.

Because the CSS will override the HTML so it will be blue.