Phase 1: Space Shuttle Math

You are packing the shuttle for takeoff. You and one other astronaut will be on the mission. The mission will be 20 days long.

You load the following supplies into the space shuttle cargo room:

Item	Total Weight of Items
10 water jugs	200 pounds
50 daily meal packs (breakfast, lunch and dinner in 1 pack)	100 pounds
2 cameras	40 pounds
3 parachutes	450 pounds
2 first aid kits	20 pounds
1 log book	10 pounds
3 space suits (200 pounds each)	600 pounds

What is the total weight of all the items that you have packed in the cargo room? (Record the answer in your logbook.)

The cargo room can only hold 1,100 pounds at takeoff. How many pounds are you over the limit? (Record the answer in your logbook.)

- Discuss with your group which items you could remove and why.
- Make sure to remove enough weight that you are no longer over the limit.
- Record the items that you would remove in your logbook.

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Phase 2: Space Map

For this mission, you will be travelling to Mars.

In your logbook:

- Draw a picture of the Sun and the correct order of the 8 planets.
- Label the 8 planets.
- Draw an arrow from the planet you are departing from to the planet you are landing on.

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Phase 3: Planet Research

Astronauts must be knowledgeable about the planets. They often use technology to research, create, and communicate.

Demonstrate your skills with technology by researching a planet of your choice. You will need to record your findings in your logbook.

Select a planet:

- Select a planet.
- Use the computer to carry out your research.
- Record your findings in your logbook.

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Phase 4: Rover Design

You are going to design a rover that will travel across Mars with you.

The rover will be:

- travelling over tough terrain;
- collecting samples;
- taking pictures.

Draw a picture of your rover design, and label which parts of your rover will be completing the 3 activities listed above.

On your design, add one other function that you think would be helpful. Explain the purpose of the function in your logbook.

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