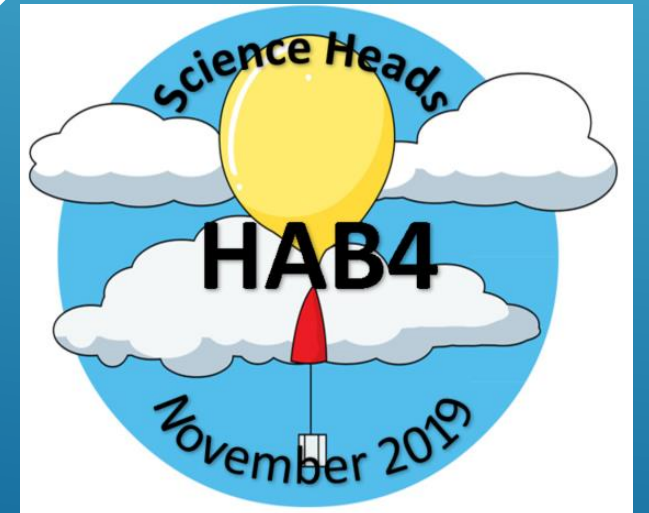




HAST-C WORKSHOP 3

Mr. Richard Stember, HAB4 Flight Director

Mr. Robert MacHale, Science Communications
Specialist (SCICOM)



USING THE

SCIENTIFIC METHOD



1 QUESTION

Ask yourself, “What do I want to learn more about?”, or “I wonder what would happen if ...?”

2 HYPOTHESIZE

Research to help you make an educated guess, or hypothesis, and then answer your question.

3 EXPERIMENT

Test your hypothesis by making a plan and conducting an experiment.

4 OBSERVE & RECORD

Make careful observations and write down what happens.

5 ANALYZE

Use your information to draw conclusions about your experiment. Was your hypothesis correct?

6 SHARE RESULTS

Explain your results by presenting your experiment, observations, and conclusions.

DESIGN YOUR EXPERIMENT – STEP 1

Identify the **Dependent** and **Independent** Variables

Independent - What You Control
(Temperature, Pressure, UV Exposure)

Dependent – What You Measure

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DESIGN YOUR EXPERIMENT – STEP 2

Draw a Schematic

List the Materials Needed



DESIGN YOUR EXPERIMENT – STEP 3

Write it up

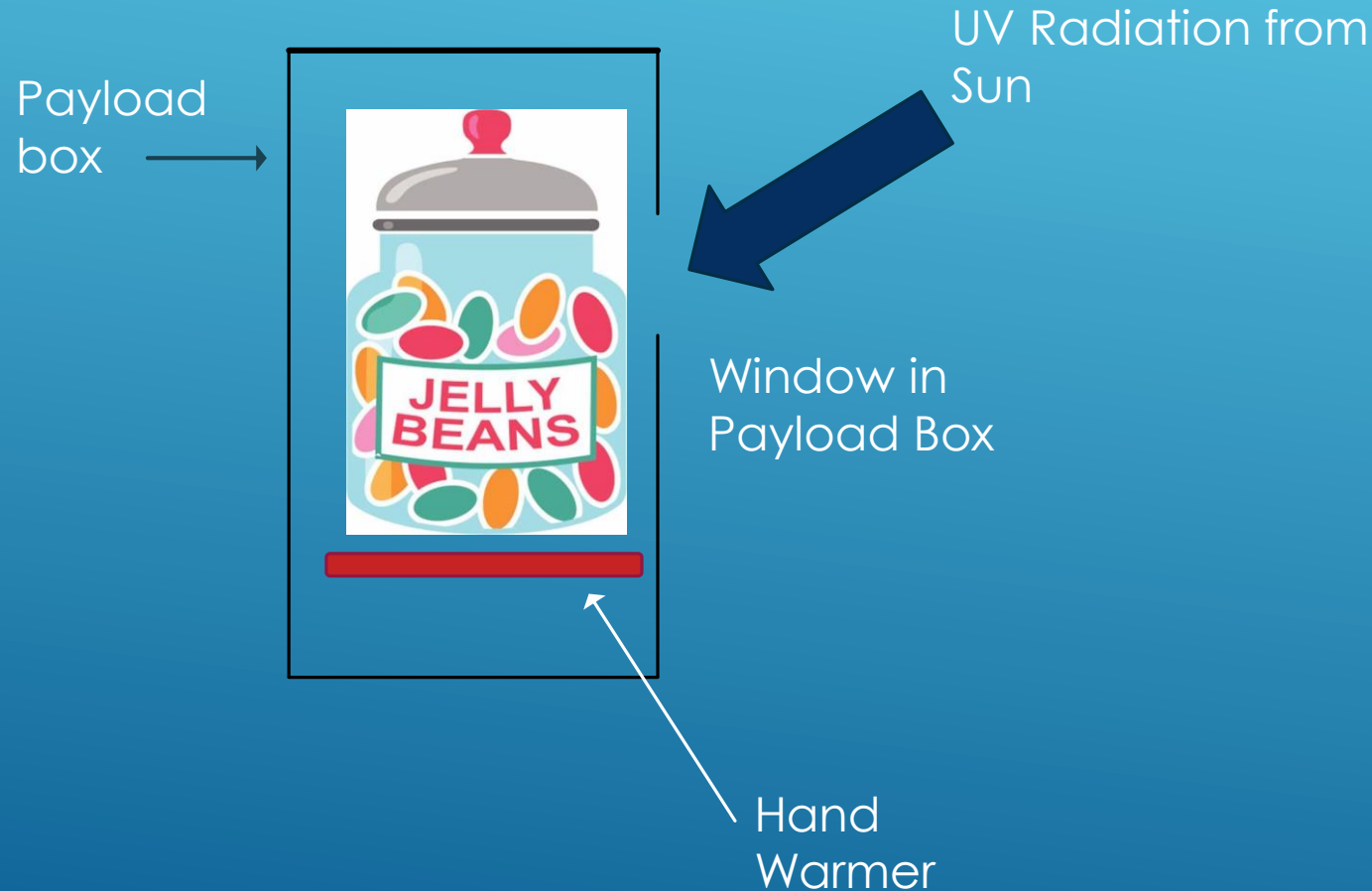
Title – Should give a good idea of the purpose of the experiment.

Introduction – Describe your objective.

Body – Describe the design and list the items needed.
Include a schematic.
List the dependent and independent variables.
Describe the procedure you will follow.


Conclusion – What question you hope to answer.

MEASURING THE EFFECTS OF UV RADIATION AND EXPOSURE TO A NEAR VACUUM ON THE TASTE OF JELLY BEANS



1. Before launch the experimenters will taste the jelly beans and rate (on a scale of 1-5) the sweetness, crunchiness, and flavor.
2. Jellybeans will be flown up to 20 miles altitude and exposed to UV radiation for about 3 hours.
3. After flight the experimenters will taste the jelly beans and rate the sweetness, crunchiness, and flavor.
4. We will average the results .

EXPERIMENT ITEM LIST

1. One 6 oz clear plastic jar with holes cut in lid. Weight = 6 oz
 2. Thirty fresh jelly beans of various flavors. Weight = 3 oz
 3. One hand warmer. Weight = 2 oz.
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NEXT WEEK

Bring a draft of your experiment proposal.



KEY DATES

- Proposals due October 11th
 - Announcement of selected experiments October 21st
 - Launch – November 9th
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