Design Thinking Workbook

Group Names: _____

UNDERSTAND
Classroom Problems

Brainstorm Guidelines

☐ Work as a group to brainstorm classroom problems.

☐ Do not stop to discuss or judge ideas shared.

☐ Write down every idea exactly as it is stated.

☐ Number your ideas.

Classroom Problems

List or draw your brainstorm classroom problems here!

1.

2.

3.

DEFINE
the problem

- ☐ Discuss which problems are most important and why.

- ☐ Highlight the three most important problems.

- ☐ Select one problem to solve from the top three.

What problem did you choose?

Explain the Problem

Explain your group's top problem in detail.
Why did you choose this problem? Why is it important
to solve this problem?

IDEATE
solutions

Directions

- ☐ Brainstorm possible solutions for a Dash accessory that might solve this problem.

- ☐ Do not stop to discuss or judge ideas shared.

- ☐ Discuss which solutions might work best.

- ☐ Highlight the three top solutions.

- ☐ Select one solution to try first.

Solution Brainstorm

List or draw your Dash accessory solution ideas here!

Explain the Solution

Explain your group's top solution in detail.
How will it work? What will it look like?
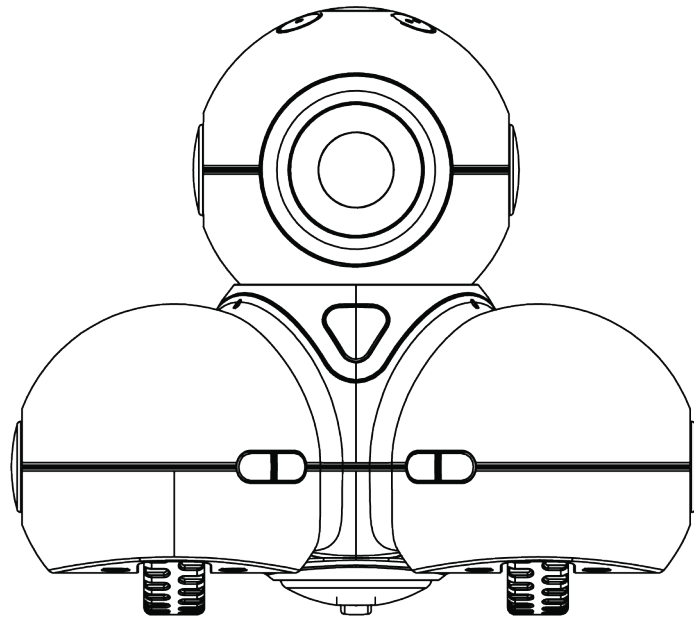
PLAN & BUILD
your protoype

Directions

☐ Determine team roles. Who will be the Documentarian? Who will be the Builder? Who will be the Programmer?

☐ Design the accessory.

☐ Make a list of the materials you'll need.

☐ Build your design.

Design the Accessory

What will your accessory look like on Dash?

Materials List

What materials will you need to build your accessory?

1.

2.

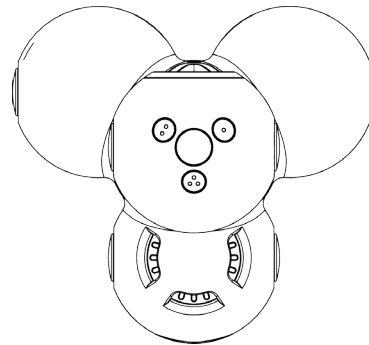3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

TEST
your protoype

Directions

- ☐ Program Dash to test and demonstrate your accessory.

- ☐ Identify any mistakes.

- ☐ Get feedback from other groups and from your teachers.

- ☐ Use the feedback to improve your design.

Plan Your Code

How will Dash demonstrate or show off your design?

Record Your Results

What happened? Did you need to fix any mistakes?
How can you improve your design?