Dash the Puppy: E 3.4 - E 3.6
Are you ready to take on the challenge?

- Review the first Challenge Card in the set.
- Use one of the Planning Worksheets to plan out your code.
- Open the Blockly app.
- Complete the challenge.
- Take a video of your robot as it completes the challenge.
- Use one of the Reflection Worksheets to reflect on your work.
- Work through each of three Challenge Cards in the same way.

**Bonus**
You can design your own Challenge Card and have your friends try them out!
Dog Trainer

Dash is acting like a puppy and you are the trainer. Train Dash to turn in a circle!

1. Create a function to teach Dash to drive in a circle. Give the function a name (such as FCircle).

2. Put a Set Wheel Speed block, a sound block, and a Stop Wheels block inside the function.

3. Under the When Start block, Call the Circle Function.

4. Add some lights and sounds to give Dash praise for doing a good job!

5. Then Call the Circle Function again so that Dash gets more practice.
Tricks Galore!

As a trainer, you are responsible for teaching a variety of tricks. Teach Dash two different tricks.

1. Dash needs to learn more tricks! Create 2 new functions.

2. Use sound blocks to make a function that teaches Dash to speak.

3. Use sound, light, and drive blocks to make a function that teaches Dash to protect you with loud noises, flashing lights, and brave moves.

4. To train Dash to do the tricks, call each function at least 3 times. Practice makes perfect!
Obstacle Course!

Many animal trainers challenge their pets by having them go through obstacle courses. Now it’s Dash’s turn!

Materials: 2 sheets of paper, 2 cups, tape, ruler

1. Use **cups** and **paper** to set up **4 obstacles**. Place the obstacles **30 cm apart** and set Dash **in front of** them. Use **tape** to mark each obstacle’s location and Dash’s starting spot.

2. Program Dash to go through the obstacle course using **2 functions**—one for each obstacle type.

Hint: You will need to **call** each function **multiple times**.

**Bonus**: Add more obstacles to the course or change the order of the obstacles.
Dash Planning Worksheet

Name(s): ________________________        Date: ________________

Coding Level: _______        Card #: _______

What do you want Dash to do?

Draw out the steps of the challenge or write a few sentences describing your goal.
General Planning Worksheet

Name(s): ___________________________  Date: __________________

Coding Level: _______  Card #: _______

1. What do you want Dash or Dot to do?
   Draw out the steps of the challenge or write a few sentences describing your goal.

2. What will you do to achieve your solution?
   What will each team member do? What steps will you need to take? What blocks will you use?
Reflection Worksheet

Name(s): ____________________________  Date: __________________

Coding Level: _______  Card #: _______

1. What did Dash and/or Dot do when you ran your program?

2. Did you make any mistakes? If so, how did you fix them?
Advanced Reflection Worksheet

Write a reflection entry in your Wonder Journal. Try to answer these questions as part of your reflection:

Results

• What did Dash and Dot do when you ran your program?

• Did you make any mistakes? If so, how did you fix them?

Connections

• What did you like the most about this challenge? Why?

• What was the most difficult part of the challenge? What did you learn from it?

Next Steps

• If you had more time, how would you change or add to your code?

• What are you planning to do next? Will you try another Challenge Card or start a new coding project?