**DASH Activities for SLP**

***Build a Maze***

Supplies: Solo Cups (from SLP kit), Straw Connectors, classroom building blocks, etc.

Students: 2 or 3

Start by asking students to **estimate** how many cups or straws they will need to build a maze. Right away this brings coding and math together in a natural real world problem. Have them write their answer on chart paper. As the activity progresses have them return to the estimate and adjust it more or less and scaffold the discussion.

For example: T – *“So how far along are you with building the maze?”*

*S – “We just started and we ran out of cups.”* T *– “Your estimate was 23 cups. So should your new estimate be more or less than 23? Why?”*

Or

S – *“We are half way done and we ran out of cups.”*

T – *“So if half the amount is 23 how many do you think you will need?”*

Having the students **draw a plan** of their maze before they start is a valuable problem solving task and creates the environment for deeper learning. As they go they can discuss any changes (debugging) they needed to do.

For example: S – “*We had to change this part of the maze because we ran into the table so we shortened this part and made a turn to go around the table*.”

As the students build the maze you could suggest they build it wide enough for them to walk around inside. Perhaps even measuring how wide that would be or how wide DASH is brings in the math concept of measuring length.

**Recording this information as they proceed and complete the task on chart paper becomes the task artifact and can be displayed on the DID-IT! – SHARE-IT! bulletin board as part of building collaboration and a Community of Practice within your camp.**

Remember with DASH there are two levels of control – the remote-control-car style and coding.

Once the maze is built the students can use **Wonder Workshop** or **Go** app and drive DASH through the maze.

If it is wide enough for students to walk through they can pretend they are DASH and another student controls them by telling them what to do. This is a natural bridge to coding – “Can I code my instructions?”

Use the **Blocky** app to code DASH to move through the maze. The discussion now is about how long each section is and what kinds of turn. At this point the students need to figure out or measure how far DASH goes with each increment.

Once the maze is build and coding other campers can try to navigate through. Make sure the original builders and coders are available to share their knowledge and coach their peers through the maze.

***Capture the Kingdom***

Great idea for blending coding and addition!

Supplies: 2 DASH robots & 2 iPads, playing cards (or number cards of any value), a grid playing surface – square floor tiles or ceramic tiles or masking tape squares on floor or use markers to make grid on plastic table cloth or 100 carpet

Students: 2, one robot manager, one robot programmer (Note: with two there is collaboration!)

Video: <https://www.youtube.com/watch?v=XluvddnVqmg> (10 minutes long). Teacher explains game and then as the students play and he scaffolds their learning/playing.

As always, have students record their learning and post on the DID-IT! – SHARE-IT! Community of Practice area.

***Bowling Game***

Great idea for creating & building structures and coding.

Supplies: Lego bricks or other building supplies, grid surface, DASH, iPad with apps

Video: <https://www.youtube.com/watch?v=R7yVKuEnGaI>

To extend it even further assign points to each “pin” and then add up the score for each programing run.

Instead of using LEGO this would be a great spot to use Maker Space material to build “pins”

Regardless of what is used to build the pin, the question can be – is the structure one that can topple over? or just be pushed aside? and then you have a connection for science with coding!

Remember with DASH there are two levels of control – the remote-control-car style with **Wonder Workshop** and **Go** apps and the coding with **Blockly** app

***Code a Polygon***

Great idea for blending coding and geometry.

Quick link to polygon information (Is it regular or irregular? Is it concave or convex? Is it simple or complex?): <https://www.mathsisfun.com/geometry/polygons.html>

Here is a Web 2.0 interactive activity: <https://www.mathsisfun.com/geometry/polygons-interactive.html>

Ask two students to draw a polygon. Have them discuss the shape.

Tell them they are going to draw it on the floor with masking tape.

Ask them, *“What is your estimate of how much tape will you need?”*

Write it down and as the task progresses return to the estimate to adjust (debug) the amount.

Measure the different sections of the polygon and add them up to find the perimeter.

Remember with DASH there are two levels of control – the remote-control-car style with **Wonder Workshop** and **Go** apps and the coding with **Blockly** app

***DASH video collection from Wonder Workshop***

Over 60 videos at this link: <https://www.youtube.com/watch?v=VsU5TtAZtjc&list=PLXSgvv3NnVuTXJLpFGeoluF8jhnXVXEd8>

Some are better than others. If you find one that is useful to our SLP experience post it to the rest of the group.