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Coding Activities with **botley** 2.0

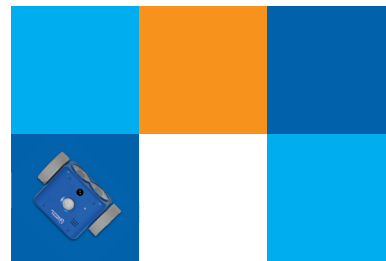
the coding robot

1. HAPPY BIRTHDAY!

- Celebrate someone's special day with Botley! Press and hold CLEAR, then enter in the following code:
Back, Back, Back, Forward, Forward, Forward.
- Now, press TRANSMIT and listen to Botley sing a special birthday song!

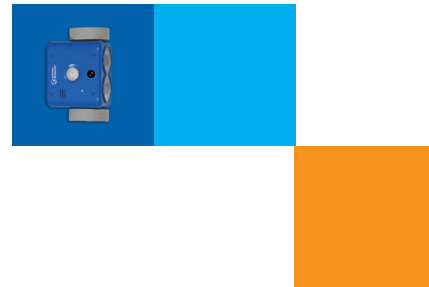
2. Back to Square One

- Use the tiles included in the set, or create your own with construction paper.
- Start on the dark BLUE tile. Code Botley to get to the light BLUE tile, and then return to the dark BLUE tile.
- Try to do this in the shortest code sequence!



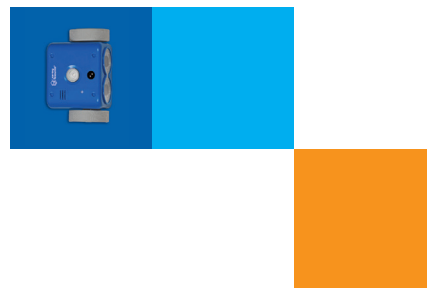
3. There and back again.

- Use the tiles included in the set, or create your own with construction paper.
- Start on the BLUE tile. Code Botley to get to the ORANGE tile, and then return to the BLUE tile.
- Try to do this in the shortest code sequence!



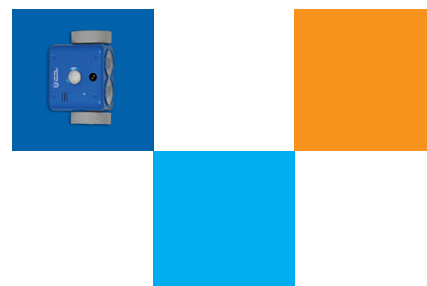
4. There and back again (again).

- Use the tiles included in the set, or create your own with construction paper.
- Start on the dark BLUE tile. Code Botley to get to the ORANGE tile, and then return to the dark BLUE tile.
- Try to do this in the shortest code sequence (4 steps!).



5. Direct Flight

- Use the tiles included in the set, or create your own with construction paper.
- Start on the light BLUE tile. Code Botley to get to the finish in the fewest steps
- HINT: Use 45-degree turns to take a shortcut and use fewer steps!





6. Freeze Dance

- Enter CODE BY COLOUR mode and program a long code (60+ steps) sequence for Botley —the longer the sequence, the better! Try different colors to create a wild light show. Now press TRANSMIT and dance along with Botley. When the music stops, FREEZE and stop dancing. Anyone still dancing is out!

7. Botley Escape Room

- Re-create a room in your house using construction blocks and other objects. Now, place Botley in the room and plan your code so Botley can escape! For a challenge, set a timer and see who can escape the quickest!

8. Robo-vacuum

- Botley likes to pretend it's a robot vacuum! Press and hold CLEAR, and then enter in the following code: Back, Back, Left45, Right45
- Now, press TRANSMIT and watch Botley "clean" the floor!

9. GOALLLLLLL!

- Place the circle goal on the ground about 10 feet in front of Botley.
- Now, snap on Botley's face mask and arms, and put the ball in front of Botley.
- Code Botley to drop off the ball into the goal. How many forward steps do you think it will take to get Botley to the goal?
- Hint – Botley moves forward 8" with each forward step

10. GOALLLLLLL x 2!

- Now score two goals!

- Place the circle goal on the ground about 10 feet in front of Botley.
- Snap on Botley's face mask and arms, and put the blue ball in front of Botley.
- Code Botley to drop off the ball into the goal.
- Now, turn around and retrieve the orange ball and bring it to the goal. Try to do this in the fewest steps.
- Hint – Botley moves forward 8" with each forward step.

11. Maze Master

- Use construction blocks to build a maze. (Be sure Botley can fit through the maze!) Now, build your code to get Botley through the maze. Take turns to see who can get through the maze in the fewest number of steps!

12. Best Buddies

- Brighten someone's day! Code Botley to bring a flower to a friend. Use Botley's mask and arms to carry the flower.

13. Build-a-Track

- Using black electrical tape, make a track for Botley. Be sure it's on a hard, smooth surface that won't be damaged by the tape. See how many laps Botley can make!

14. Take Botley for a walk!

- Just like you, Botley needs exercise to stay healthy. Build the biggest code you can (up to 80 steps!) and transmit it to Botley. Now, follow along behind and repeat Botley's moves. Whew! What a workout!



15. Alpha-Botley

- Think of a letter of the alphabet, like the first letter of your name. Now, plan out a code for Botley to “build” that letter. Try it for other letters of the alphabet!

16. Number-Botley

- Think of a number from 0–9. Now, plan out a code for Botley to “build” that number. How many numbers can you “code”?

17. Botley Distancing

- Set up a number of objects around the floor (blocks, toy cars, etc.). Place Botley in the middle of them.
- Now, code Botley to move, but use OBJECT DETECTION to avoid touching or getting close to any of the objects. Program a really long code so Botley avoids all of them!

18. Botley Bowling

- Snap on Botley’s mask and arms.
- On a smooth surface, arrange 10 blocks or dominos like bowling pins, about 3 feet away from Botley.
- Code Botley to knock down all the “pins.”
- For added math fun, take turns and keep score. Add up your knocked-down “pins” on each turn.

19. Break it down

- Botley is a super-strong robot! Using toy construction blocks, can you build a tower strong enough to withstand Botley?
- Build the wall or tower, and then code Botley to try to knock it down.

20. Message in a Botley

- Write a secret message on a piece of paper and place it in Botley’s hands.
- Now, code Botley to bring the message to a friend. Have them write one and code Botley to bring it back to you!

21. Egg on a Spoon

- On a large sheet of white paper, make a squiggly track with a thick black marker. Now, snap on Botley’s face mask and arms, and put Botley in LINE mode. Place the ball on Botley’s hand. See if Botley can keep the “egg” from dropping while it zig-zags along the line.

22. Botley 500

- On a large sheet of paper, draw a large oval shape in black marker to create a racetrack. Make sure the line is thick enough. Now, see how long Botley can push the ball along the track.

23. YELTOB! (that’s BOTLEY backwards!)

- Using blocks or any other materials, build a maze for Botley.
- Now, turn Botley around and code Botley to go through the maze BACKWARDS!

24. Follow the Leader

- Have one player code a sequence for Botley (don’t show it to the other player!).
- Now, press TRANSMIT and watch Botley execute the code.
- Press CLEAR.
- Now, the other player needs to re-create that code!
- Can you repeat the steps?



25. Robot in Disguise

- Use construction paper or other materials to make a “costume” for Botley! Be sure not to cover up Botley’s top or front sensors!

26. Balancing Ball Challenge

- Snap on Botley’s mask and arms, and place one of the balls on its hands.
- Now, build a 40-step code for Botley. For a real challenge, add in a lot of left and right turns.
- Now, grab a spoon and place the other ball on it.
- Have someone press TRANSMIT. While Botley carries the ball on its hands, follow Botley and repeat its moves. Try not to drop the ball off the spoon! Who will carry it the longest?

27. Botley Curling

- Cut out paper “targets” and place them on the floor about 12 feet in front of Botley. Now, take turns coding Botley to get as close to the inner circle as possible.

Assign points:

Blue Ring = 10 points

White Ring = 20 Points

Red Ring = 50 points

- Add up all points after 3 tries!

28. Get Up & Dance

- Program a long code (60+ steps) sequence for Botley—the longer the sequence, the better! Try combinations of forward & back, and left & right turns.
- Now, play your favorite song, and dance along with Botley!

29. TRAFFIC JAM!

- Make a maze of toy cars or blocks so that it looks like a traffic jam.
- Now, build a code to get Botley through the traffic without hitting any cars!

30. Botley Squared

- Can you code Botley to make the smallest square possible?
- Now, program Botley to make a square twice that size. How about 4x that size?
- Make the biggest square you can. Try using the loop feature to create your program.

31. Enter the Octagon

- Can you code Botley to make an octagon?
- Now, program Botley to make an octagon twice that size. How about 4x that size?
- Make the biggest shape you can.
- Try using the loop feature to create your program.

32. Making Art with Botley

- Place a thin felt-tip marker in each of Botley’s hands (if they don’t fit, you can tape them to his hands). Remove the caps of the markers.
- Now, place Botley on a large sheet of paper. Code Botley to create one-of-a-kind masterpieces! Be sure to use 45-degree turns to make your artwork unique!

33. Downtown Bot

- Use cardboard boxes to build a city landscape for Botley to travel around. Include skyscrapers and tunnels!



34. Chain Reaction

- Carefully set up dominos or other thin blocks or books, standing them up in a line or pattern.
- Code Botley to knock them down by hitting the “head” domino.
- Try to make a “chain reaction” and knock them all down!

35. Food Delivery

- Balance a small plate or tray on Botley’s hands, load it up with play food (make it with popular modeling dough or clay), and code Botley to deliver your food, hands-free!

36. Surprise Note

- Code Botley to bring a note of encouragement or just say “Hi”! Write out a note and code Botley to hand-deliver it to someone to brighten their day!

37. Room Guard

- Code Botley to act as a sentry to guard your room.

38. Cleanup Time

- Toys and blocks are everywhere—have Botley clean them up! Use Botley’s mask and arms, or the new Crashin’ Construction set, and code Botley to move them out of the way.

39. Getting Dizzy!

- Use left (or right) turn commands to make Botley spin around like a top.
- Now, while Botley spins, you spin too!
- Can you spin as much as Botley without getting dizzy?!

40. Word Jumble

- Write the letters of your name on separate pieces of paper.
- Scramble the letters and line them up in a row.
- Now, program Botley to go to each letter, in order, to spell your name. Scramble the letters again and enter a new program.

41. Tug O’ War

- This one requires two people. Sit about 10 feet apart on a smooth surface and place Botley in the middle.
- One person will do the coding.
- Flip a coin. If it lands on “heads,” code Botley to go forward 2 steps toward the other person. If it lands on “tails,” code Botley to go backward toward you. Be sure to press CLEAR between coin flips.
- The player Botley gets closest to is the winner!

42. Be Like Botley

- Pretend you are a robot like Botley. The only way you can move is by following commands and moving in sequences of steps.
- Print out or create on paper arrow commands like FORWARD, BACK, TURN LEFT and TURN RIGHT. Be sure to include both left and right 45-degree turn commands.
- Now, move around your house just as Botley would, but move step by step, calling out your command as you do!

43. Botley Rodeo

- Get a small action figure or doll and place it on top of Botley. Now, code Botley to move around the room. See how far you can go before your “rodeo rider” falls off!



44. I Spy (3 or more players)

- One player selects an object in the room. Next, they program Botley to go to the object. Press TRANSMIT and say, "Botley spies with his two eyes something...(give a hint)."
- Now, the other players shout out which object they think Botley spies. The first to guess correctly wins! Now, it's their turn to program Botley!

45. Botley Hopscotch (for advanced coders!)

- Use pieces of paper to set up a hopscotch board (or draw it on butcher block paper).
- Code Botley to go from 1 to 5, making sure he "steps" on each numbered square in the correct order.

46. Add 'Em Up!

- On a large piece of paper, make a 6 x 2 grid, and number the spaces 1–12.

- Now, roll two dice. Whatever the numbers add up to, code Botley to get to that number.
- Try this with subtraction too!

47. Space Explorer

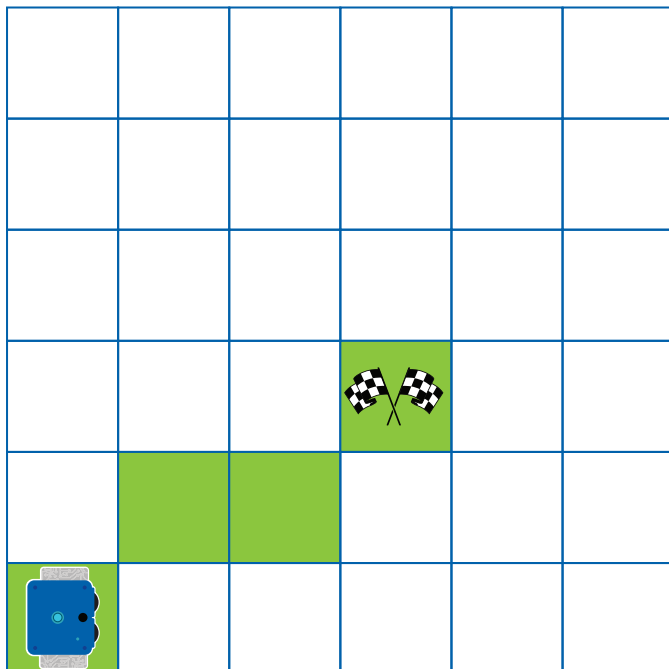
- On a large sheet of paper, re-create this simple map of the solar system, showing all planets in a row.
- Call out a planet name, and then code Botley to get as close to that planet as possible. Try to name a fact about that planet.

48. Spin the Botley

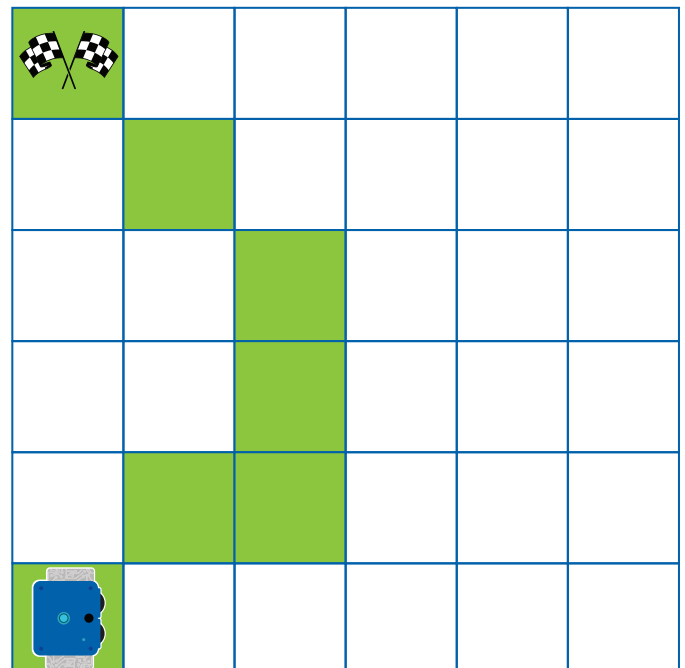
- Play this with a small group.
- Place Botley on the ground and press RIGHT TURN several times (at least 10x).
- Press TRANSMIT.
- When Botley stops, whomever it is pointing to needs to stand up and tell a joke, sing a song, or do a dance.

- Use ARROW commands to "code" Botley through the maze to the goal!

49. Botley Maze 1



50. Botley Maze 2





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Coding Activities with botley 2.0 the coding robot

55. Botley Maze 7