



TBM Assembly

The Tunnel Boring Machines (TBMs) are put together like jumbo building blocks.

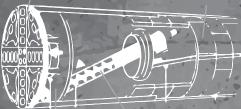
The TBM bores forward and installs tunnel liner rings to form the tunnel structure.

From Great Northern Way–Emily Carr Station, the TBMs tunnel 5km to Arbutus Station.

Meet the TBM!

Cutterhead

Tunnel liner rings



Excavation chamber

Screw conveyor

Did you know?

The TBMs can move about **18 metres** or **60 feet** per day!

Let's get ready!

We can use paper cutouts to learn more about these big machines!

For this experiment, you will need:

- printed TBM template (pages 3 and 4)
- scissors

- white glue, tape, or a glue stick
- a paper towel roll

Let's get started

Let's put together a tunnel boring machine! Carefully cut out the TBM front and back caps. Build each cap by folding and gluing the purple tabs inside the round face. Wrap the TBM body around a paper towel roll and glue along the purple lines. Gently set the front and back caps in place on each end of the roll. You can turn the front cap of the TBM cutterhead in the same way that it moves through the ground!

What do you think will happen?

Think about how the TBM will move forward into the earth.

- → Why does the cutterhead need to move?
- → Can you find all of the pieces inside the TBM? (excavation chamber, screw conveyor, cutterhead, tunnel liner rings)



See the TBMs in action!

Check out this video of the inside of the TBM! What parts can you see?



Write what you learned

How did the TBMs get here?

See Phyllis and Elsie's voyage across the ocean!

TBM Shipment 1
Animation



TBM Shipment 2
Animation





Come see our progress!

Did you know you can watch construction at Great Northern Way and Thornton Street?

Take a peek through the viewing windows and snap a photo with Digby!

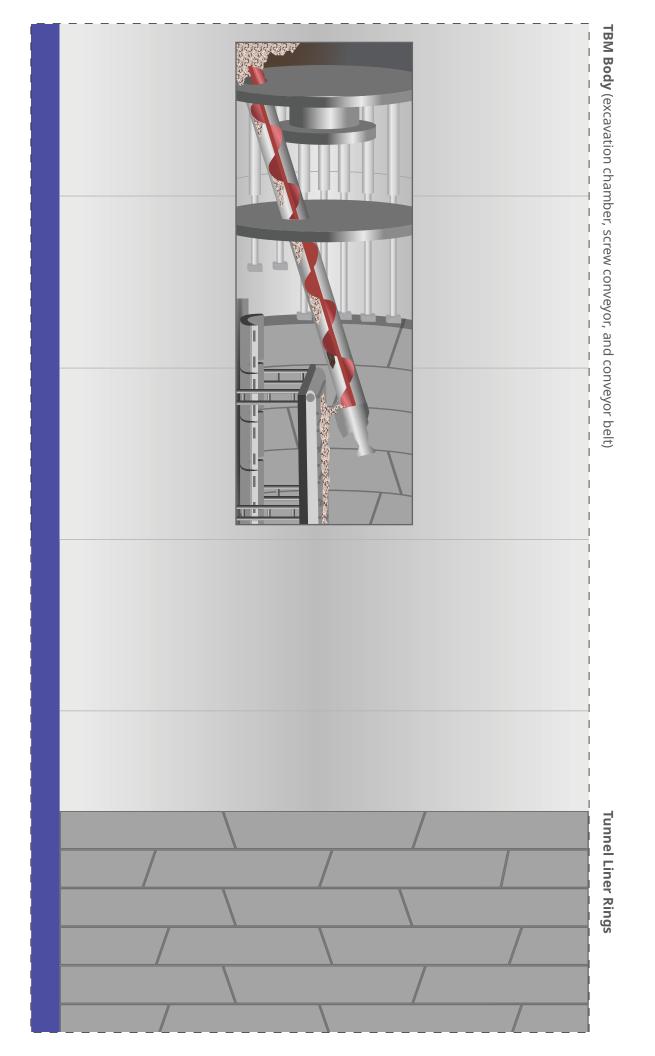




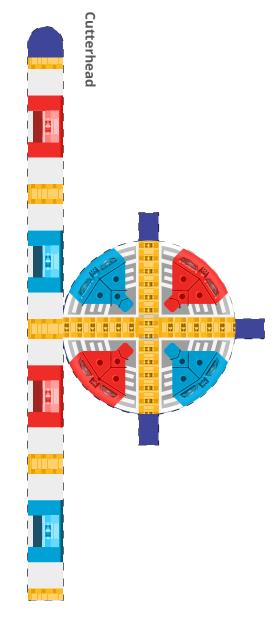




TBM Cut-out - Page 1



TBM Cut-out - Page 2



Conveyor belt

