"WHY I MAKE ROBOTS THE SIZE OF A GRAIN OF RICE"

3. Watch the talk again and select the two most important ideas that Bergbreiter wants her audience to understand.

1. ☐ The scale of robots is getting smaller every year.
2. ☐ Micro-robots have many possible applications.
3. ☐ Micro-robots of the future will be semi-intelligent.
4. ☐ Engineering mobility on a small scale is a big challenge.

4. One of Bergbreiter's key terms is movility. Watch the talk again and complete the segments below with words or phrases that refer to this key term.

Segment 1

1. *"First of all, how do we get the capabilities of an ant in a robot at the same size scale? Well, first we need to figure out how to make them _____ when they're so small."*
2. *"I'll start with _____. Insects _____ around amazingly well. This video is from UC Berkeley. It shows a cockroach moving over incredibly rough terrain without tipping over."*
3. *"_____ is another really interesting way to _____ when you're very small."*

Segment 2

4. *"So, the next video is one of my favorites. So you have this 300-mg robot _____ about eight centimeters in the air."*
5. *"So, I think you can imagine all the cool things that we could do with robots that can _____ and _____ and _____ and _____ at this size scale."*

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5. Watch the talk and complete the notes with details.

Segment 3

Intro:

- Bergbreiter and students work on _____ (1) robots
- Think of robotic versions of _____ (2)
- Challenge = get capabilities of ant in robot same _____ (3) scale

Segment 4

Contributions from B's lab:

- Combine _____ (4) and _____ (5) materials in small mechanism
  - _____ (6) material = silicon
  - _____ (7) material = silicon rubber
- No _____ (8) on board, no power

What we could do with micro-robots:

- After natural disastors, look for _____ (9)
- Inspect _____ (10) to make sure it's _____ (11)
- They could operate without having to _____ you open