How can we achieve improvements in the way educators keep students engaged and focused in the classroom through the use of wearable technology?

**OUR SOLUTION**
Sparq pairs an application for teachers with a wearable band device for students, to enhance course material engagement through personalized participation.

### STUDENT WEARABLE
- **Customization**: Customized characters allow students to make their learning more personable and fun.
- **Character Companionship**: The unique character remains with the student throughout all lessons. The student can ping the teacher to ask a question on the static screen.
- **Quick Individual Assessments**: Students can individually respond to questions posed by the teacher to ensure that they are staying on track throughout the lesson.
- **Instant Feedback**: Character responds with instant feedback, or after the quiz has been closed by the teacher, and encourages the student to stay engaged.

### TEACHER APP
- **Question Queue**: Once students ping the teacher with a question using their wearable device, the teacher can check the list from the question queue.
- **Create Quizzes**: Lesson plans and learning quizzes can either be created ahead of time or on the spot, tailoring to the needs of the teacher.
- **Edit Quizzes**: Teachers are able to edit their lesson quizzes at any time, as well as view statistics of previously posted lesson quizzes.
- **Student Data**: Teachers are able to edit their lesson quizzes at any time, as well as view statistics of previously posted lesson quizzes.

### RESEARCH
- To learn about barriers faced by students and educators
  - Competitive analysis and literature review
  - Surveys by 22 current and past K-12 teachers
  - Interviews with 5 teachers and 2 parents

### IDEATION
- To explore various methods of increasing student engagement in low fidelity
  - Affinity diagram to uncover core themes from initial research
  - Storyboarding and personas, building the basis for our design concepts
  - Initial design sketches leading to the creation of a paper prototype

### OBSERVATION
- To evaluate our initial ideas and their feasibility in a classroom environment
  - 240 minutes of observations in 4th & 6th grade classrooms
  - Identify additional design opportunities

### DESIGN
- To finalize our solution for utilization by teachers and students
  - High fidelity prototypes for our wearable and teacher app
  - Design critique with our sponsors
  - Final team critique and iteration