Stages of Argument-Driven Inquiry

**Stage 1: Identification of the Task and the Guiding Question**
The teacher presents students with a topic to investigate and provides a guiding question for them to answer. The teacher also leads a "Tool Talk".

Groups of students then...

**Stage 2: Design a Method and Collect Data**
Each group is responsible for developing a method to collect data. Each group then carries out their plan and collects the data they need.

The groups of students then...

**Stage 3: Analyze Data and Develop an Initial Argument**
The argument includes a claim (which is an answer to the guiding question), evidence, and a justification of the evidence. Each group creates their argument in a medium that can easily be seen by others (such as a whiteboard or a poster).

Each group then shares their argument during an...

**Stage 4: Argumentation Session**
Each group shares their argument while the audience asks questions and offers critiques. After the session, each group is given an opportunity to revise their initial argument.

The teacher then leads an...

**Stage 5: Explicit and Reflective Discussion**
The teacher and the students discuss the content, ways to improve the design of an investigation, relevant crosscutting concepts, and concepts related to the nature of science or the nature of scientific inquiry.

Individual students then...

**Stage 6: Write an Investigation Report**
Each student writes a report to share what they learned during the investigation. The report includes three sections: the question of the investigation, the method used, and the argument.

Each report then goes through a...

**Stage 7: Double Blind Group Peer Review**
Each group uses a peer-review guide to evaluate the quality of three different investigation reports. Groups are required to give the author feedback.

Individual students then...

**Stage 8: Revise and Submit the Report**
The original report is revised based on the results of the peer-review process and submitted to the teacher for a final evaluation.

Collect Additional Data
Groups are encouraged to collect additional data if a flaw in a method was identified or an idea that needs to be tested was mentioned during the argumentation session.