

Sensemaking:

Talk moves in a science education professional development

Elena Culpepper

Sierra Morandi, Ellen Granger, & Sherry A. Southerland

INTRODUCTION

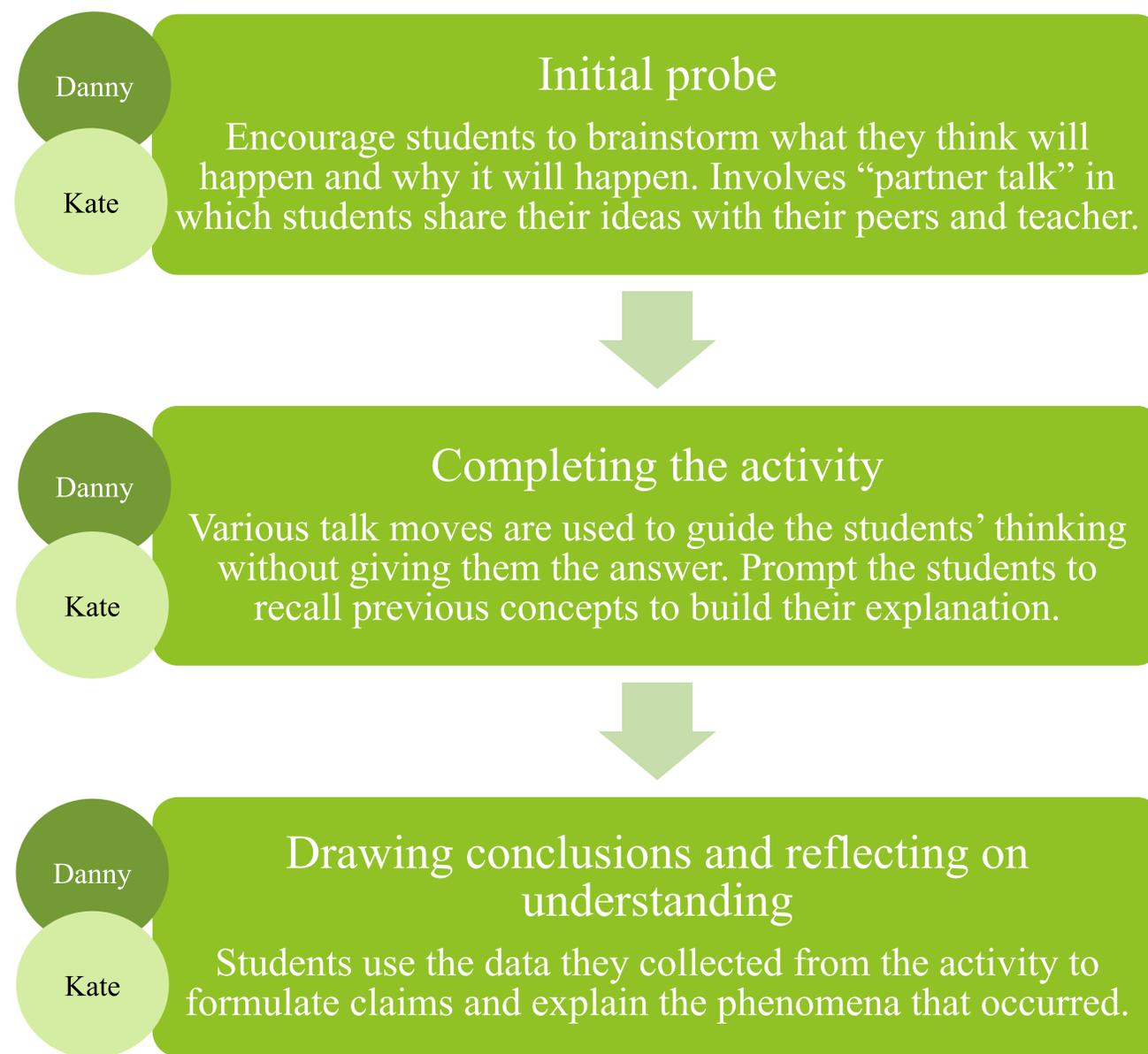
Sensemaking is a teaching practice that makes learning accessible for all students (Brown & Bybee, 2023). Talk moves are one way in which teachers can facilitate and support sensemaking in science classrooms (Wray et al, 2022).

METHODS

1. Two teachers that were apart of a multi-year professional development project
2. Lessons from each teacher were recorded
3. Classroom video, audio, and transcript data were analyzed
4. Phase I Coding: flagging moments of teacher-student interaction
5. Phase II Coding: categorizing each moment under a specific talk-move

Teacher	Race/sex	Grade-level taught	Subject
Danny	White, male	High school	Advance-placement (AP) chemistry
Kate	White, female	Middle school, 8 th grade	Biology for high school credit

Talk Move	What it means	Example
Asking for evidence	Seeking justification from the student; press for examples	<ul style="list-style-type: none"> • Why do you think that?
Cross talk	Teacher-guided student conversations	<ul style="list-style-type: none"> • Do you agree with what ___ said? • Can someone add to what ___ said?
Rephrase	Rephrasing what a student said	<ul style="list-style-type: none"> • So, what you're saying is ___. • When you say ___ do you mean ___?
Say more	Following up on a student's ideas; building off their initial thoughts	<ul style="list-style-type: none"> • Tell me more. • What makes you think that?



RESULTS

Both Kate and Danny followed a similar pattern when delivering their lesson. Each activity started with an initial probe, followed by the completion of an activity, and ended with the students drawing their conclusions and reflecting on what they learned based on the data they gathered. Through all phases of their lesson, we see Kate and Danny engage in various talk moves to support their students sensemaking.

CONCLUSION

Researchers have previously described the need for learners to engage in rigorous and authentic science learning opportunities (Brown & Bybee, 2023). In the case of Kate and Danny, we see a similar structure of the lesson and talk moves. These similarities might stem from being in the same PD cohort. Where the goals of sensemaking through talk were emphasized. In these lessons using talk moves, we see the beginnings for students to have opportunity to build on past learning experiences and construct new foundations for their learning.

SELECT REFERENCES

- Brown, P., & Bybee, R. (2023). Promoting sensemaking. *Science and Children*, 60(4), 30-33.
- Wray, K. A., McDonald, S., Lee, H.-S., & Pallant, A. (2022). Using teacher talk moves to help students talk like scientists. *Science Teacher*, 90(2), 56–60.