

# SCIENCE DISCOURSE FOR ALL

PRODUCTIVE SCIENCE TALK CENTERED AROUND A PHENOMENON WHERE ALL STUDENTS ARE ACTIVELY SHARING AND CLARIFYING THEIR THOUGHTS TO DEEPEN THEIR UNDERSTANDING WHILE FOSTERING A COLLABORATIVE LEARNING ENVIRONMENT WHERE EVERY VOICE IS VALUED AND HEARD.

## CLASSROOM ARRANGEMENT

CHANGES TO THE PHYSICAL ARRANGEMENT OF THE CLASSROOM IS NECESSARY FOR ALL VOICES AND IDEAS TO BE VALUED AND HEARD IN THE DISCUSSION.

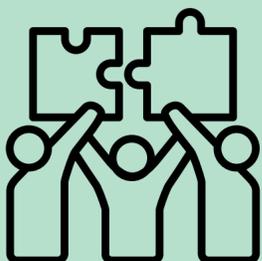


## INTERACTION

HELPS STUDENTS DEVELOP SOCIAL SKILLS AND MOTIVATES THEM TO LEARN BY COLLABORATING WITH OTHERS.

## MULTIPLE MODALITIES

SUPPORTS STUDENTS' SENSEMAKING WITH MULTIPLE REPRESENTATIONS WHILE ENCOURAGING PARTICIPATION OF ALL LEARNERS TO CONVEY THEIR SCIENCE IDEAS THROUGH VARIED FORMS OF ACTION OR EXPRESSION.



## COMMUNITY

ESTABLISHES A SAFE CLASSROOM CULTURE THAT ENCOURAGES ALL STUDENTS TO SHARE THEIR IDEAS AND EXPERIENCES OPENLY WITH OTHERS.

## PHENOMENA

PROVIDES THE OPPORTUNITY TO WONDER, ASK QUESTIONS, AND SEEK EXPLANATIONS ABOUT A PHENOMENON OR PROBLEM. ENGAGES STUDENTS IN THREE-DIMENSIONAL LEARNING AS STUDENTS WORK TOGETHER TO COMMUNICATE THEIR IDEAS, GATHER FEEDBACK AND REFINE THEIR THINKING.

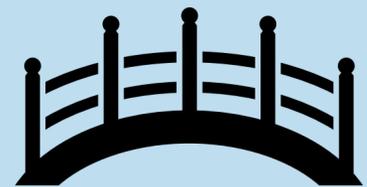


## REAL WORLD

EMPOWERS STUDENTS TO LEARN SCIENCE AUTHENTIC TO THE FIELD BY ENGAGING IN ARGUMENTATION USING EVIDENCE FROM THEIR INVESTIGATIONS.

## CULTURE

BRIDGES LEARNING BETWEEN SCHOOL, COMMUNITY AND THE STUDENTS' EVERYDAY LIVES TO SHOW STUDENTS THEY MATTER.



## COMMUNICATION

REVEALS STUDENTS' THINKING TO THE TEACHER AND CLASSMATES WHILE CAPTURING THEM IN A VISUAL WAY. ALLOWING STUDENTS TO SEE IDEAS FROM MORE ANGLES AND LINKS TO OTHER CONCEPTS AND MEANINGS THEY ALREADY HAVE.

## GROWING IDEAS

BROADENS PARTICIPATION WITHIN THE ROOM WHERE ALL STUDENTS SHARE, CLARIFY AND DEVELOP THEIR IDEAS.

