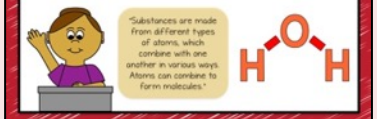
FULL PAGE COLOR

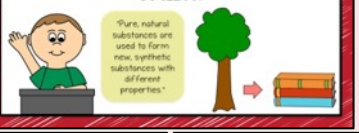
MS-PSI-1
STRUCTURE & PROPERTIES OF MATTER

DEVELOP MODELS TO DESCRIBE THE ATOMIC COMPOSITION OF SIMPLE MOLECULES AND EXTENDED STRUCTURES.



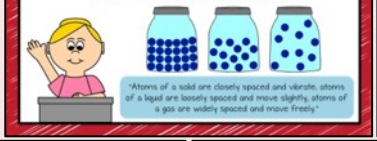
MS-PSI-3
STRUCTURE & PROPERTIES OF MATTER

GATHER AND MAKE SENSE OF INFORMATION TO DESCRIBE THAT SYNTHETIC MATERIALS COME FROM NATURAL RESOURCES AND IMPACT SOCIETY.



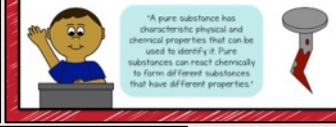
MS-PSI-4
STRUCTURE & PROPERTIES OF MATTER

DEVELOP A MODEL THAT PREDICTS AND DESCRIBES CHANGES IN PARTICLE MOTION, TEMPERATURE, AND STATE OF A PURE SUBSTANCE WHEN THERMAL ENERGY IS ADDED OR REMOVED.



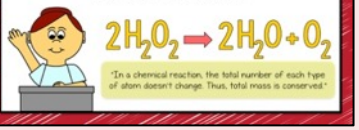
MS-PSI-2
CHEMICAL REACTIONS

ANALYZE AND INTERPRET DATA ON THE PROPERTIES OF SUBSTANCES BEFORE AND AFTER THE SUBSTANCES INTERACT TO DETERMINE IF A CHEMICAL REACTION HAS OCCURRED.



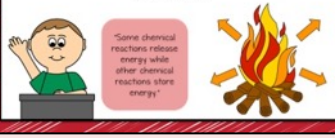
MS-PSI-5
CHEMICAL REACTIONS

DEVELOP AND USE A MODEL TO DESCRIBE HOW THE TOTAL NUMBER OF ATOMS DOES NOT CHANGE IN A CHEMICAL REACTION AND THUS MASS IS CONSERVED.



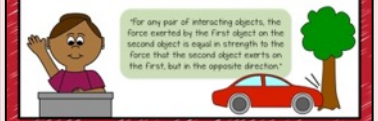
MS-PSI-6
CHEMICAL REACTIONS

UNDERTAKE A DESIGN PROJECT TO CONSTRUCT, TEST, AND MODIFY A DEVICE THAT EITHER RELEASES OR ABSORBS THERMAL ENERGY BY CHEMICAL PROCESSES.



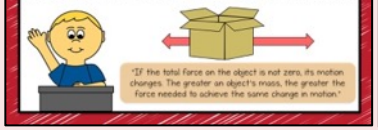
MS-PS2-1
FORCES & INTERACTIONS

APPLY NEWTON'S THIRD LAW TO DESIGN A SOLUTION TO A PROBLEM INVOLVING THE MOTION OF TWO COLLIDING OBJECTS.



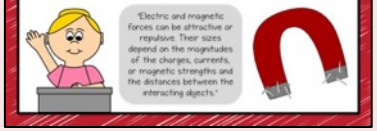
MS-PS2-2
FORCES & INTERACTIONS

PLAN AN INVESTIGATION TO PROVIDE EVIDENCE THAT THE CHANGE IN AN OBJECT'S MOTION DEPENDS ON THE SUM OF THE FORCES ON THE OBJECT AND THE MASS OF THE OBJECT.



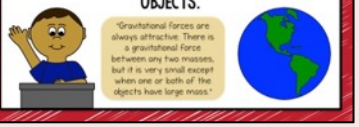
MS-PS2-3
FORCES & INTERACTIONS

ASK QUESTIONS ABOUT DATA TO DETERMINE THE FACTORS THAT AFFECT THE STRENGTH OF ELECTRIC AND MAGNETIC FORCES.



MS-PS2-4
FORCES & INTERACTIONS

CONSTRUCT AND PRESENT ARGUMENTS USING EVIDENCE TO SUPPORT THE CLAIM THAT GRAVITATIONAL INTERACTIONS ARE ATTRACTIVE AND DEPEND ON THE MASSES OF INTERACTING OBJECTS.



MS-PS2-5
FORCES & INTERACTIONS

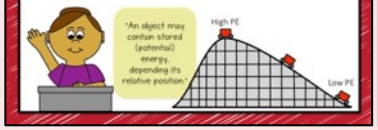
CONDUCT AN INVESTIGATION AND EVALUATE THE EXPERIMENTAL DESIGN TO PROVIDE EVIDENCE THAT FIELDS EXIST BETWEEN OBJECTS EXERTING FORCES ON EACH OTHER EVEN THOUGH THE OBJECTS ARE NOT IN CONTACT.

MS-PS3-1
ENERGY

CONSTRUCT AND INTERPRET GRAPHICAL DISPLAYS OF DATA TO DESCRIBE THE RELATIONSHIPS OF KINETIC ENERGY TO THE MASS OF AN OBJECT AND TO THE SPEED OF AN OBJECT.

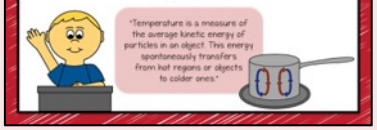
MS-PS3-2
ENERGY

DEVELOP A MODEL TO DESCRIBE THAT WHEN THE ARRANGEMENT OF OBJECTS INTERACTING AT A DISTANCE CHANGES, DIFFERENT AMOUNTS OF POTENTIAL ENERGY ARE STORED IN THE SYSTEM.



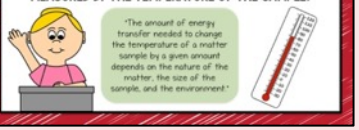
MS-PS3-3
ENERGY

APPLY SCIENTIFIC PRINCIPLES TO DESIGN, CONSTRUCT, AND TEST A DEVICE THAT EITHER MINIMIZES OR MAXIMIZES THERMAL ENERGY TRANSFER.



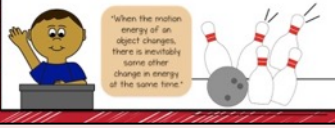
MS-PS3-4
ENERGY

PLAN AN INVESTIGATION TO DETERMINE THE RELATIONSHIPS AMONG THE ENERGY TRANSFERRED, THE TYPE OF MATTER, THE MASS, AND THE CHANGE IN THE AVERAGE KINETIC ENERGY OF THE PARTICLES AS MEASURED BY THE TEMPERATURE OF THE SAMPLE.



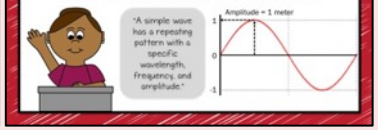
MS-PS3-5
ENERGY

CONSTRUCT, USE, AND PRESENT ARGUMENTS TO SUPPORT THE CLAIM THAT WHEN THE KINETIC ENERGY OF AN OBJECT CHANGES, ENERGY IS TRANSFERRED TO OR FROM THE OBJECT.



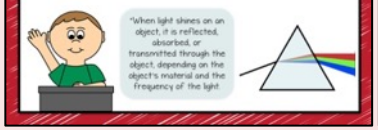
MS-PS4-1
WAVES & ELECTROMAGNETIC RADIATION

USE MATHEMATICAL REPRESENTATIONS TO DESCRIBE A SIMPLE MODEL FOR WAVES THAT INCLUDES HOW THE AMPLITUDE OF A WAVE IS RELATED TO THE ENERGY IN A WAVE.



MS-PS4-2
WAVES & ELECTROMAGNETIC RADIATION

DEVELOP AND USE A MODEL TO DESCRIBE THAT WAVES ARE REFLECTED, ABSORBED, OR TRANSMITTED THROUGH VARIOUS MATERIALS.



MS-PS4-3
WAVES & ELECTROMAGNETIC RADIATION

INTEGRATE QUALITATIVE SCIENTIFIC AND TECHNICAL INFORMATION TO SUPPORT THE CLAIM THAT DIGITIZED SIGNALS ARE A MORE RELIABLE WAY TO ENCODE AND TRANSMIT INFORMATION THAN ANALOG SIGNALS.

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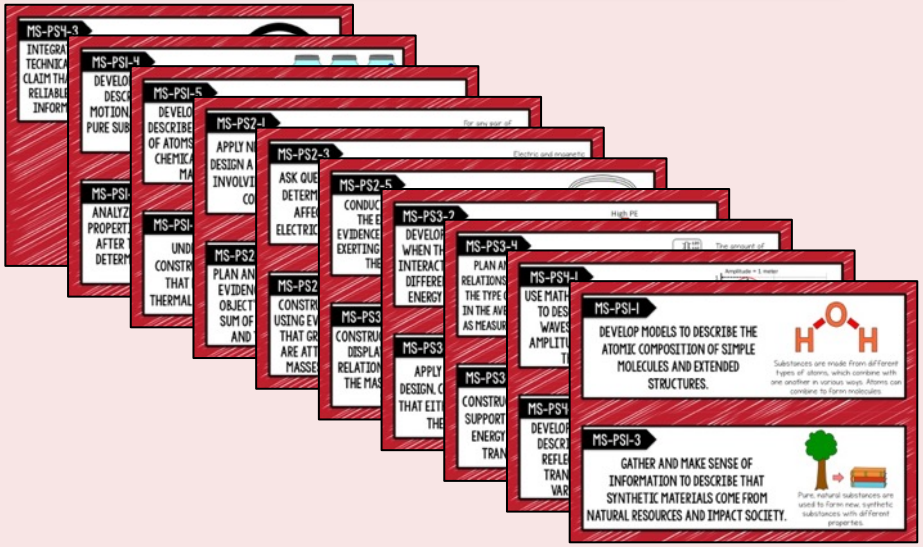

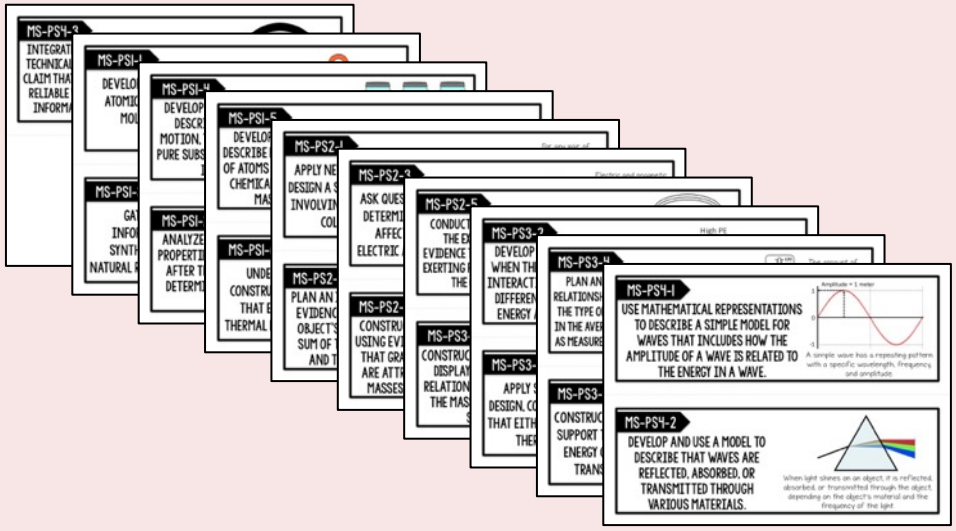

STUDENT MINIS IN COLOR & B/W
WITH & WITHOUT KEYHOLE PLACEHOLDER