



# astronaut

## Space 2

Spanish	astronauta (äs trō nou´ tä)
Vietnamese	phi hành gia (fē han jyä)
Hmong	tus neeg mus saum hli (dü ning mü shou hlē)
Cantonese	太空人 (tī hō myäng)
Korean	우주 비행사 (ü dzü bē hang sä)
Haitian Creole	astronòt (as tō nôt´)
Arabic	TK (rrä ʔet fä däʔ)
Russian	астронавт (äs trō näft´)
Tagalog	astronot (as´ trō nôt)
Khmer	អាស្រ័យ (at vârtˋ kă jô)

An astronaut is a person who travels into space. Over four hundred people have made a trip into space. Astronauts travel into space on a space shuttle, and some stay in space for extended periods of time on a space station.

Astronauts have landed and walked on the moon but have not visited any other bodies in the solar system. Some astronauts have done space walks, which means they go outside the shuttle while it is still in space. When astronauts do a space walk, they rely on special space suits to give them what they need to live.

### Card Connections Linking Ideas

#### Additional Space Cards

*moon (Space 22), space shuttle (Space 39), space station (Space 40)*

#### Other Cards

*air (Weather and Water 1), gravity (Force and Motion 10), temperature (Matter and Change 33)*



# phases of the moon

Space 26

Spanish	fases de la luna (fä' sā s dā lä lü' nă)
Vietnamese	các tuần trăng (kak twun trăn)
Hmong	hli xiab mus rau hli nqig (hlē sē ä mū dō hlē ǵē)
Cantonese	月球朔望 (ū' kou sā' mōng)
Korean	달의 위상 (gä rwē wē sung)
Haitian Creole	faz lalin-nan (fäz' lä lēn' nă)
Arabic	أطوار القمر (ät wärr' el ǵô' märr)
Russian	фазы Луны (fä' zē lü nē')
Tagalog	pagbabago sa hugis ng buwan (päg bä bä' gō sā hō' gēs nung bü' wun)
Khmer	២២២ (kiy knout)

One half of the moon is always illuminated by the sun. As the moon orbits Earth, we see some portion of the illuminated half. There are eight phases of the moon: new moon, waxing crescent, first quarter, waxing gibbous (gib' əs), full moon, waning gibbous, last quarter, and waning crescent. They are always seen in that order.

The phases of the moon repeat every 29.5 days. Phases that occur at the beginning of most months repeat at the end of the months. Every 2.7 years a month has two full moons. The second full moon is known as a blue moon. The image on the front of this card shows phases of the moon at different times during a month.

**Card Connections**

**Linking Ideas**

## Additional Space Cards

*crescent moon (Space 8), Earth (Space 11), gibbous (Space 14), moon (Space 22), sun (Space 43)*





# fog

## Weather and Water 21

Spanish	niebla (nyā' blä)
Vietnamese	sương mù (shüng mō)
Hmong	pos huab (pô hü ä)
Cantonese	霧 (mō)
Korean	안개 (än gā)
Haitian Creole	bouya (bü yä')
Arabic	ضباب (thä bā' äp)
Russian	туман (tü män')
Tagalog	ulap na hamog (ü' lup' nä hä' müg)
Khmer	ពន្លឺ (ap)

Fog is a cloud that comes in contact with the ground. The only difference between fog and other clouds is that fog touches Earth's surface, while other clouds are not in contact with the ground. Both fog and clouds are made of masses of water droplets. Fog usually forms when warm air containing water vapor comes in contact with a colder surface, such as a colder ocean or mountaintop. The cold surface causes the water vapor to condense, forming water droplets. Because the water droplets in fog scatter light rays, it can be difficult to see objects in the fog. Airports and highways often have devices that blow away fog or break it up by spraying it with salt.

### Card Connections

### Linking Ideas

#### Additional Weather and Water Cards

*air* (Weather and Water 1), *cloud* (Weather and Water 14),

*condensation* (Weather and Water 16)

#### Other Cards

*light* (Energy 20), *gas* (Matter and Change 11)



# eruption

## Changing Earth 5

Spanish	erupción (ā rūp syōn´)
Vietnamese	phún (fűng)
Hmong	qhov tawg los (kô dūr lô)
Cantonese	爆發 (bou fǎ~)
Korean	분출 (pūn chül)
Haitian Creole	eripsyon (ā rēp syōn´)
Arabic	انفجار (en fē zhārr´)
Russian	извержение (ēz vār zhe´ nē ye)
Tagalog	pagsabog (päg sä´ bōg)
Khmer	ឈាត់ (bôn tü´)

An eruption is the escape of molten rock, ash, and gas from below the surface of Earth. An explosive eruption is a strong ejection of rock, ash, and gas. An effusive eruption is a quiet flow of lava. A mixed eruption is a combination of an explosive eruption and an effusive eruption. Hawaiian eruptions are usually effusive eruptions of thin, high temperature magma that has low gas content. However, explosive eruptions have taken place at the Kilauea volcano in Hawaii as recently as 1920's.

### Card Connections

### Linking Ideas

#### Additional Changing Earth Cards

*erosion (Changing Earth 4), volcano (Changing Earth 19)*

#### Other Cards

*ash (Inside Earth 2), igneous rock (Inside Earth 17), lava (Inside Earth 18), magma (Inside Earth 21)*





# folding

## Changing Earth 9

Spanish	plegamiento (plā gä myen´ tō)
Vietnamese	tạo nếp (dou nip)
Hmong	av quav/tais (ä ˘kwä tī)
Cantonese	板塊褶皺 (băn fī dzip dzou)
Korean	폴딩 (pôl ding)
Haitian Creole	pliyan (plē yän´)
Arabic	ثنية (then´ ye)
Russian	складкообразование (skläd´ kä äb rä zä vä´ nē yə)
Tagalog	paglupi (päg lü pē´)
Khmer	វេច (pnôt)

Folding is the permanent bending of one or several layers of sedimentary or metamorphic rock. Tremendous pressure pushes the rock layers from both sides, causing them to fold. Folds can vary in size from very small to mountain-sized. Folds can occur singly, or there can be many folds of different sizes.

### Card Connections

### Linking Ideas

#### Additional Changing Earth Cards

*plate tectonics (Changing Earth 11)*

#### Other Cards

*layer (Inside Earth 19), pressure (Matter and Change 28),  
push (Force and Motion 19)*