Experiment 3 Isotropy

WHAT YOU NEED

Cornstarch
Water
Large bowl

PROCEDURE

1. In the bowl, mix a cup of cornstarch with ¼ cup of water.
2. Continue adding water until it reaches the consistency of pancake batter.
3. Use your hands to knead the mixture thoroughly.
4. Once mixed, take a handful and squeeze it hard. When the mixture is squeezed, it will feel firm as long as there is still pressure. If you stop squeezing, the mixture will return to a liquid form and flow between your fingers.

WHY THIS HAPPENS

When agitated, some liquids have the ability to become firm. This property is called isotropy. The opposite of this is called thixotropy, when a fluid becomes thinner when pressure is applied. You can observe isotropy in action if you bury your foot in the sand at the edge of a beach when the sand is full of ocean water. It's hard to quickly pull your foot out of the sand and water mix. But if you pull your foot out slowly, it will flow between your toes and off of your foot. The Bible tells a story about a prophet who got stuck in some nasty, muddy muck. Take a moment to read about him.

Mud Medicine

Believe it or not, Jesus even used mud in one of His healing miracles. Decipher the following cryptogram to read about it.

“ϖ ∇   ∏ ∞ ♥   ϕ ∞ ℵ   ♦ %   ϕ ⊗   ∇ ⊗ ∇ α,”

♥ ϖ ∇   ϕ ψ %   Ξ ∇ ∏ Σ √ ∇ ℵ, “ψ % ℵ   √

 ψ α ϖ ∇ ℵ, ψ % ℵ   % ♦   √   α ∇ ∇.”

∀ ♦ ϖ % 9:15, % √ #

Key

A	ψ
B	+
C	Φ
D	ℵ
E	∇
F	—
G	Θ
H	ϖ
I	√
J	∀
K	ω
L	Σ
M	ϕ
N	%
O	♦
P	∏
Q	=
R	Ξ
S	α
T	♥
U	∞
V	#
W	
X	∂
Y	⊗
Z	Ω

Sticky Situations

by Kelly Bevill

Sometimes in life we find ourselves in sticky situations. The Bible tells us about a man named Jeremiah who got really stuck. He was a prophet. A prophet is someone who receives special messages from God. God told Jeremiah to warn the city of Jerusalem that it was going to be attacked. (See Jeremiah 38:1-13.)

Jeremiah obeyed God and warned the people. But instead of listening to Jeremiah, the king's officials decided to throw Jeremiah into a cistern. A cistern is a huge tank that stores water that isn't being used. But this cistern didn't have any water in it, only mud.

The mud was very sticky, and Jeremiah sank down into it. Jeremiah didn't have any food while he was in the cistern.

But God protected Jeremiah. He sent someone to ask the king to free Jeremiah. So the king sent 30 men to lower ropes and lift Jeremiah out of the mucky cistern.

When we listen to what God tells us to do He will protect us, even though sometimes life can get a little sticky along the way. Maybe you are having a tough time right now with something. Ask God to help you. No matter how "stuck" you may feel, God can answer your prayer. e

E-mail your comments to pe@ag.org.

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