

④関係資料2

研究テーマ一覧

1学年 Mission I 「科学探究講座 I」

番号	科目	題目
1	物理学	The effects of various car shapes on air resistance and downward air force
2	物理学	Size of paper airplanes as a factor affecting their total flight distance
3	生物学	Sunlight and color as a factor affecting the cellular structure of waterweeds
4	生物学	Analysis of the relationship between text color and reading speeds of humans
5	生物学	Experiment on the growth of flowers in the presence of different genres of music
6	物理学	Resonant frequencies of sound created from various volumes of water in a glass cup
7	物理学	Study of a rugby ball's bounce trajectory when dropped on different surfaces
8	生物学	Effects of various saline solutions used for watering white radish sprouts on their total height growth
9	物理学	Using truss structures inside barriers to measure its sound proof ability
10	物理学	Measuring the flying time of paper airplanes when various types of folding paper are used
11	物理学	Paper airplane size and the effects it has on flight distance
12	生物学	Classical conditioning experiment on degu (octodon degus) using sounds as a positive reinforcement for food
13	生物学	Measuring the amount of fungi that grows on cheese when exposed to different temperatures
14	物理学	The ratio of water to air inside a PET bottle rocket and its effects on the distance it flies
15	生物学	Research on the color of ink used on a test and the effects it has on human memory
16	生物学	Intensity of light exposed to growing plants as a factor affecting their growth
17	生物学	Different concentrations of hyponex solution in water and its effects on the preservation time of flowers
18	生物学	The effects that different genres of music have on the growth of white radish sprouts
19	生物学	Differing colors of light and their effect on the growth and resulting sucrose concentration of strawberries
20	化学	Various concentrations of water and starch as a factor affecting the durability of liquids
21	化学	Concentration of sugar in Japanese rice cakes and the effect it has on their softness
22	化学	Experiment on the creation of a rainbow when various concentrations of sugar water are used
23	化学	Various concentrations of agar in ice cream and their melting speeds at room temperature
24	生物学	Amount of digestive enzymes in Drosera rotundifolia as a factor affecting their digestive speed of food
25	物理学	Study on the wing size of paper airplanes and their resulting flying distance
26	化学	Popping time of bubbles when differing concentrations of soap water are used
27	化学	Potato starch concentration and the effects it has on a solutions durability
28	生物学	Study on a turtle's (Mauremys reevesii) ability to see color by using differently colored food over a long period of time
29	化学	Baking soda added to a wax candle and the effects it has on extinguishing a flame
30	物理学	Trajectory angle as a factor affecting the impact momentum of the round spheres of a newton's cradle
31	化学	CO2 of carbonated water as a factor affecting the buffer zone of a solution when NaOH is added
32	物理学	Study on the number of sheets used to make a paper airplane and the distance it flies in the air
33	化学	Study on the insulation ability of cotton wrapped around a PET bottle filled with water at low temperatures
34	物理学	Ratio of water to air in a PET bottle rocket and the effects it has on the distance it flies
35	生物学	Various colors of light and their effects on the photosynthetic ability of waterweeds
36	化学	Research on the effects of baking powder and the thickness of pancakes
37	化学	Amount and temperature of water, as well as salt and sugar water, as factors affecting the resonant frequency produced in a glass cup
38	物理学	Experiment on the length and type of string affecting the clarity of sound produced from a string telephone
39	物理学	Different frequencies of sound and their effects on the pattern made in sand
40	化学	Research of the effects of sunscreen SPF on the color change of UV beads
41	化学	Various materials of cup covers as a factor affecting the insulation ability of a cup
42	化学	Research on the total mixed volume of two molecules when their molecular sizes are different
43	化学	Study on the magnus effect of balls dropped from a height at various spinning speeds
44	物理学	Wind strength and angle as factors affecting the speed of a car with a sail on it
45	物理学	Experiment on a Japanese Grass lizard's (Takydromus tachydromoides) ability to see color by using colored food and location
46	生物学	Study on the different ratios of two liquids mixed together and the amount of light they produce
47	化学	Research on the surface tension of sugar water when various floating weights are present
48	物理学	Different shapes of train heads and their effects on the air resistance of a train when moving
49	生物学	Study on the positive phototaxis behaviour of insects using different colors of light

50	生物学	Study on the anti-bacterial effects of indigo dye on lacto bacillus bacteria
51	物理学	Study on the elasticity of an elastic band when temperature is changed
52	生物学	Research about the color of light and its effects of the growth speed of plants
53	物理学	Research on the effects of mesh hole size on the area of wind that passes through the hole
54	化学	Popping time variation of bubbles when liquid pH or viscosity is changed
55	物理学	Changing the weight of a paper airplane and the effects it has on its flying distance
56	地学	Mineral classification depending on the amount of manganese found inside aragonite
57	化学	Sawdust powder as a factor affecting the melting time of ice
58	物理学	Wing size as a factor affecting the flying distance of a PET bottle rocket
59	物理学	Varying shapes of a badminton shuttle and the effects it has on its flying trajectory and distance
60	物理学	Pipe diameter or number of coils as factors affecting the speed of a handmade pop pop ship
61	物理学	Length of a boomerang as a factor affecting the distance it travels in the air
62	物理学	Study on the bounce height of a tennis ball after many subsequent impacts
63	生物学	Temperature and humidity as factors influencing the amount of mold that grows on fruit
64	生物学	Various genres of music on the growing speed of white radish sprouts
65	生物学	Classical conditioning experiment on degu (octodon degus) using food to teach different shapes in a maze
66	生物学	Exposure of different types of music on white radish sprouts as they grow
67	物理学	Speed and internal air pressure of a soccer ball as factors affecting the speed it travels in the air when kicked
68	化学	Research on different viscosities and the flowing speed of a sugar solution
69	化学	Ratio of water to starch in a solution and its resulting impact durability when an object is dropped on it
70	生物学	Experiment regarding white radish sprout's growing speeds and different sugar solutions
71	生物学	Frequency of sound and white radish plant's growth rates