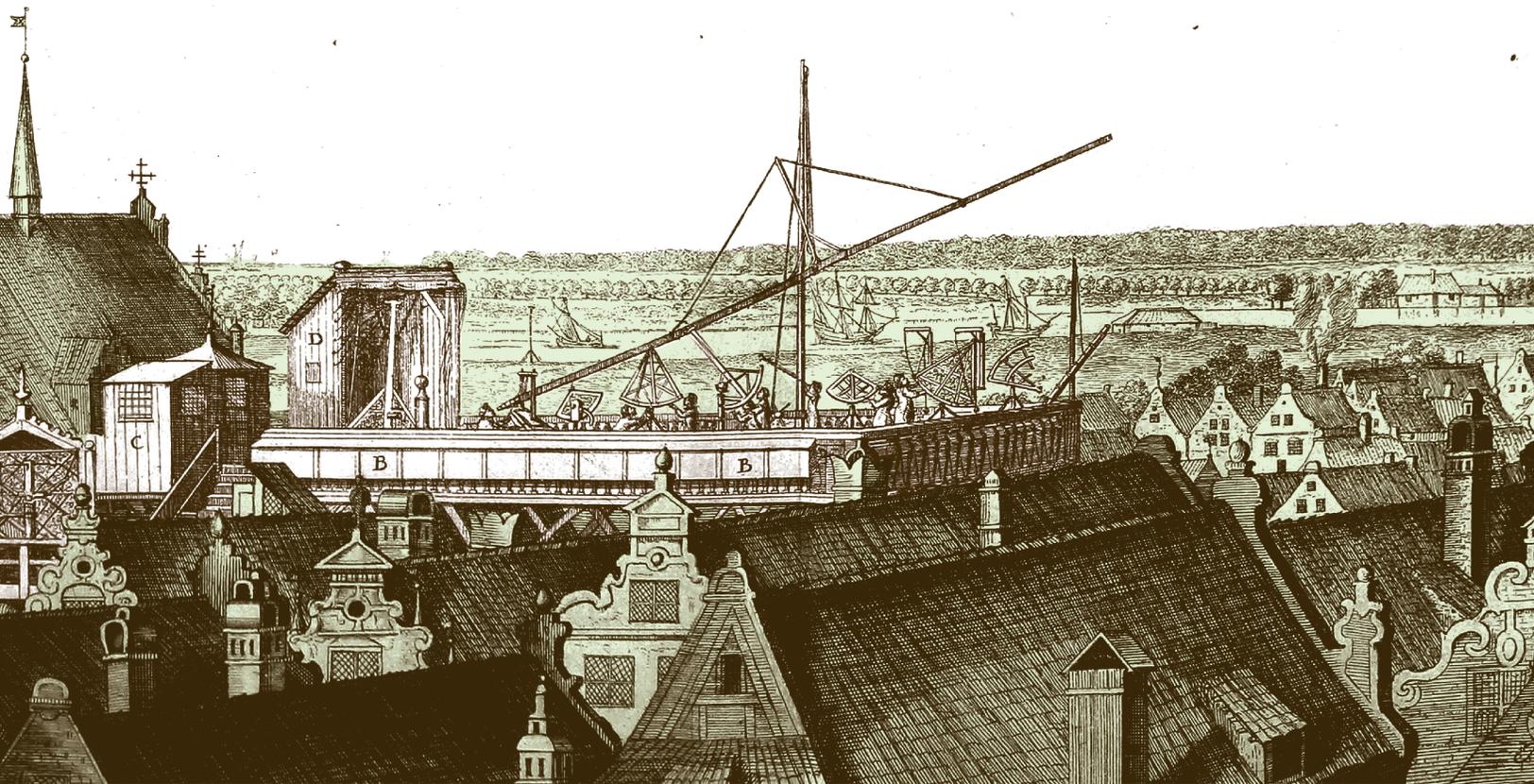


*Dirk Knemeyer's*

# THE NEW SCIENCE

THE GIANTS UPON WHOSE SHOULDERS THE WORLD OF SCIENCE STANDS

You are one of the finest minds from the scientific revolution in 17th century Europe. Use your limited time and energy to research discoveries, experiment on new ideas, publish papers, respond to opportunities that happen around you and network with important people. The scientist viewed as the most prestigious will be appointed first President of the Royal Society and win the game!

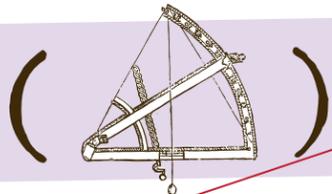


CONQUISTADOR  
GAMES

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# CLIQUEISH: ASTRONOMY

54 Happening Cards bring some spice to your life



Players who have no markers in Astronomy may not add any this turn.

The effect of the happening in art and text

How to use:  
**EFFECT** - global effect this turn  
**PLAY** - win, then play immediately  
**KEEP** - win, then place in an open laboratory spot

During a time when access to knowledge was limited, gatekeepers could wield inappropriate control.

**EFFECT**

Cards with the 4+ marker are only used in a game of 4 or more players

4+

**PLAY**

**KEEP**



6-sided Die for attempting experiments



15 Energy Markers (3 in each of 5 colours) for selecting actions



50 Discovery Markers (10 in each of 5 colours) for marking your progress up the discovery tree



35 Track Markers (7 in each of 5 colours) to represent you on the various tracks

# COMPONENTS

## THE SCIENCE TREE

Advancing up the science tree requires your having knowledge of every pre-requisite discovery. In order to have knowledge, you must either have successfully experimented on a discovery or any player must have published it.

Some discoveries, like Heliocentrism and Planetary Motion, are grouped. This is indicated by the larger outside box grouping both together. You only need to have knowledge of one among a group of discoveries in order to meet the pre-requisite and advance up the tree.

Continuing the example, you only need knowledge of Heliocentrism or Planetary Motion - not both - to advance higher up the tree.

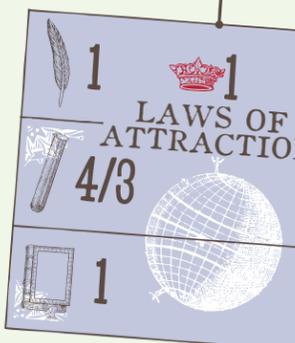
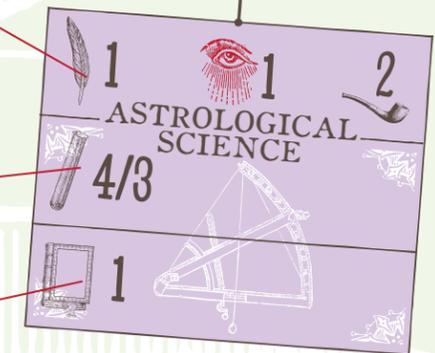
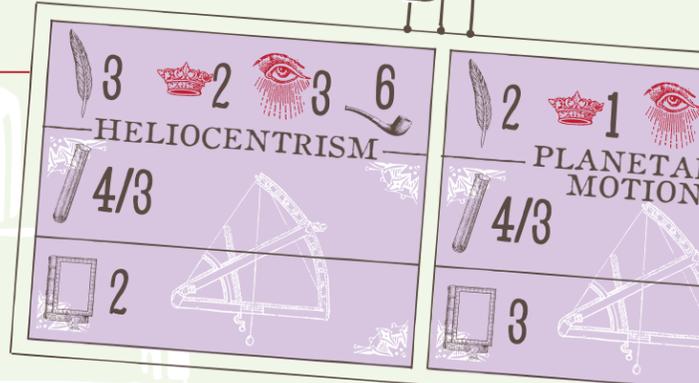
## DISCOVERIES

The key to The New Science is publishing discoveries and gaining prestige. Discoveries are represented on the board with rectangles split into three parts: publish on top, experiment in the middle, and research on the bottom. Consider Astrological Science:

The publish area, indicated by the quill, lists the requirements to successfully publish, and the prestige award for being the person to do so. In this case, it requires 1 point to publish and 1 religion influence. The player who publishes will receive 2 prestige.

The experiment area, indicated by the test tube, lists the target number for successfully experimenting, in this case 4 for the first player and 3 for subsequent players, after it was successfully experimented on.

The research area, indicated by the book, lists the points (1) required to successfully research this discovery.



Any benefits your scientist may provide in research, experiment and publishing

Benefits your scientist starts the game with

Place your energy here at the start of each turn

Used to decide turn order on first turn

Your scientist's colour

## ATHANASTUS KIRCHER

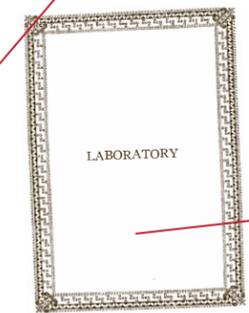
Germany, 2 May 1601 - 27 November 1680  
 Athanasius Kircher is remembered as 'master of a hundred arts', a polymath whose interests had no bounds. Thanks to many of his theories later proving incorrect, Kircher is barely remembered today; yet, he was without question the great European superstar of science during much of his life. His work was justified and promoted by his allies in the Catholic church, but the great Rene Descartes denigrated him as 'more quick-silver than savant.'



start with: 2 Religion influence

3 energy each turn

+1 [book icon] 0 [test tube icon] +2 [quill icon]



Laboratory spot for your one "KEEP" happening card

LEVEL	DISCOVERY	RESEARCH			EXPERIMENT			PUBLISH			PRESTIGE	PRE-REQUISITES
		1	2	3	1	2	3	1	2	3		
1	Galileo Galilei	2	1	0	0	0	0	0	0	0	0	
2	Johannes Kepler	0	0	0	2	1	0	0	0	0	0	Mathematics 1
3	Athanasius Kircher	0	0	0	1	1	0	0	0	0	0	Mathematics 2 • Astronomy 2
4	Gottfried Leibniz	0	0	0	1	1	0	0	0	0	0	Mathematics 2 • Astronomy 2
5	Isaac Newton	0	0	0	1	1	0	0	0	0	0	Mathematics 3 • Mathematics 4 • Physics 4
1	Logarithms	1	4	3	1	1	1	1	1	1	2	Mathematics 2 • Astronomy 2
2	Rudolphine Tables	3	6	5	3	3	3	3	3	3	6	Mathematics 2 • Astronomy 2
3	Analytic Geometry	3	5	4	2	2	2	2	2	2	5	Mathematics 2 • Astronomy 2
4	Probability Theory	2	2	2	2	2	2	2	2	2	5	Mathematics 3
5	Tangents & Inverses	2	5	4	3	3	3	3	3	3	10	Mathematics 4 • Physics 4
1	Calculus	2	4	3	3	3	3	3	3	3	10	Mathematics 4 • Physics 4
1	Astrological Science	1	4	3	1	1	1	1	1	1	2	Astronomy 1 • Physics 1
2	Heliocentrism	2	4	3	2	2	2	2	2	2	6	Astronomy 2 • Physics 1
3	Planetary Motion	3	4	3	2	2	2	2	2	2	4	Astronomy 2 • Physics 1
4	Reflecting Telescope	2	6	5	3	3	3	3	3	3	7	Mathematics 2 • Astronomy 2
1	Laws of Attraction	1	4	3	1	1	1	1	1	1	2	Astronomy 2 • Chemistry 2
2	Vacuum	3	5	4	2	2	2	2	2	2	6	Astronomy 3 • Physics 3
3	Pendulum Theory	3	5	4	2	2	2	2	2	2	6	Astronomy 3 • Physics 3
4	Spectrum of Light	2	5	4	3	3	3	3	3	3	6	Astronomy 3 • Physics 3
4	Spectrum of Light	2	5	4	3	3	3	3	3	3	6	Astronomy 3 • Physics 3
4	Elastic Force	3	5	4	2	2	2	2	2	2	3	Physics 4 • Chemistry 4
5	Laws of Motion	3	6	5	3	3	3	3	3	3	10	Physics 4 • Chemistry 4
1	Chemical Equations	1	4	3	1	1	1	1	1	1	2	Chemistry 1
2	Carbon Dioxide & Gas	3	5	4	2	2	2	2	2	2	4	Chemistry 2 • Biology 2
3	Vacuum	2	6	5	3	3	3	3	3	3	7	Physics 3 • Chemistry 3
4	Chemical Drugs	3	5	4	3	3	3	3	3	3	6	Physics 3 • Chemistry 3
4	Theory of Gases	3	5	4	3	3	3	3	3	3	8	Chemistry 4
5	Phlogiston Theory	2	6	5	3	3	3	3	3	3	8	Chemistry 4
1	Microscope	1	4	3	1	1	1	1	1	1	2	Biology 1
2	Circulation of Blood	2	4	3	3	3	3	3	3	3	5	Biology 2
3	Cellular Structure	3	5	4	2	2	2	2	2	2	5	Biology 2
4	Theory of Disease	3	5	4	3	3	3	3	3	3	7	Chemistry 3 • Biology 3
5	Laws of Experimentation	3	6	5	2	2	2	2	2	2	8	Chemistry 4 • Biology 4

Overview of all discoveries

5 Scientist Mats for each player's aid during the game

**ACTIONS**

1 2 3 4 5

**TRACKS**

TURN ORDER: 1 2 3 4 5

REST: 1 2 3

INFLUENCE: 1 2 3 4 5

GOVERNMENT

RELIGION

ENTERPRISE

SCIENCE

PRESTIGE: 0 1 2 3 4 5

**THE NEW SCIENCE**  
 THE GIANTS UPON WHOSE SHOULDERS THE WORLD OF SCIENCE STANDS

LEVEL 1: CALCULUS (3/6/5), LAWS OF MOTION (3/6/5), PHILOGISTON THEORY (3/6/5), LAWS OF EXPERIMENTATION (2/3/8)

LEVEL 2: TANGENTS & INVERSES (3/5/4), PENDULUM THEORY (2/5/4), SPECTRUM OF LIGHT (3/5/4), ELASTIC FORCE (2/5/4), THEORY OF GASES (3/5/4), THEORY OF DISEASE (3/5/4)

LEVEL 3: ANALYTIC GEOMETRY (2/5/4), PROBABILITY THEORY (1/5/4), REFLECTING TELESCOPE (3/6/5), VACUUM (3/5/4), CHEMICAL DRUGS (3/6/5), CELLULAR STRUCTURE (2/5/4)

LEVEL 4: RUDOLPHINE TABLES (3/6/5), HELIOCENTRISM (3/4/3), PLANETARY MOTION (2/4/3), CARBON DIOXIDE & GAS (2/5/4), CIRCULATION OF BLOOD (3/5/4)

LEVEL 5: LOGARITHMS (1/4/3), ASTROLOGICAL SCIENCE (1/4/3), LAWS OF ATTRACTION (1/4/3), MICROSCOPE (1/4/3)

Game Board

## OVERVIEW

In *The New Science*, you play the role of one of the great scientists from the scientific revolution in 17th century Europe. You are attempting to publish your remarkable scientific discoveries in order to gain prestige, be seen as the finest mind of your era, and consequently be appointed the first President of the Royal Society.

You achieve this by first researching, then experimenting on, and finally publishing new discoveries. But you need to carefully decide what and when to publish: while the only way to win is by gaining prestige, once you publish your discovery all other scientists will share your advanced knowledge, costing you an advantage.

Your efforts can be further impacted by critical happenings in the world around you. You've precious little energy to put into the many groundbreaking scientific disciplines.

## SETUP

1. Place the game board and die in the center of the table within easy reach of all players.
2. Depending on the number of players, determine how many random happening cards will be used. Be sure to remove the "4+" cards in a two or three player game first:

- 2 players - 6 of each level
- 3 players - 4 of each level
- 4 players - 10 of each level
- 5 players - 8 of each level

Then shuffle the happening cards in play by level and stack them with all level 1 cards on top, then level 2 and finally level 3, placing them beside the game board.

3. Decide which player will control which scientist. Take your scientist mat and the energy markers, track markers and discovery markers of the corresponding colour indicated on your mat. Place your energy and discovery markers by your scientist mat, then place the remaining track markers by the various tracks on the game board.
4. Initial turn order is: Kepler, Galileo, Kircher, Leibniz, Newton. Depending on how many players are in your game, following this order, place your track markers in the above turn order moving up to fill any gaps. So, for example, in a three player game with Newton, Kepler and Kircher, Kepler should be in the first turn order spot, Kircher in the second and Newton in the third.

You are now ready to play!

## TURN SEQUENCE

Each turn is split into three phases:

1. **Allocate Energy**
2. **Action Resolution**
3. **Cleanup**

## ALLOCATE ENERGY

Players take turns, following the turn order, by placing one energy marker on one of the various actions on the board. Each action spot may only be used once. Players continue to place their energy until all are used.

Each turn, every player has three energy to allocate. In order to take an action you simply place an energy on the action you are interested in. Only one player may use each action spot, meaning the first player to place their energy takes that action.

## ACTION RESOLUTION

In action order, from left-to-right and top-to-bottom on the board, all players execute the actions they placed their energy on. Remove your energy from the board as each action is resolved. The actions are:

### REST

Place your energy marker on the highest empty spot on this action. This impacts both the turn order and rest tracks. During action resolution, the player with energy on the highest spot becomes first player on the next turn, bumping all other players down a spot. The second highest spot becomes second player and so forth. Any players who did not take a rest action stay in their previous order but are now behind all of the other players who did use the action. Each player who took a rest action also moves one higher up the rest track, not to exceed the track's limit of 3.



Rest

Rest is a strategic reserve, giving you the crucial assistance you may need to research, experiment or publish on more complicate discoveries. To use your built-up rest you simply announce during any action resolution, when you wish to use it, how much of your accumulated rest you are applying to that action, take the benefit and move your track marker down a corresponding number of spots on the rest track.

### HAPPENINGS

There are three types of happening cards: Effects, which cannot be avoided; these happenings automatically take effect for the entire upcoming turn. Plays, which are controlled by the player who spent an energy on it and are immediately resolved during this action resolution phase. Keeps, which are controlled the player who spent an energy on it and are placed in the laboratory spot on their scientist mat for later use, which could even be later in the same turn. Some keeps have unlimited use while others are one-time effects, instructing you to discard them after use. You must add a newly-won keep to your laboratory and remove from the game any keep you already have there.

As new happenings are placed during the cleanup phase, there are no happenings on the first turn of the game.

### INFLUENCE

Place an energy on any of the influence actions and, during action resolution, move your track marker one spot up the corresponding track. Influence serves both as a requirement for publishing certain discoveries and a small prestige bonus at game's end. Players may not advance beyond the 5 spot at the top of the influence tracks.



Government Religion Influence Enterprise Science

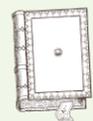
### DISCOVERY ACTIONS

The heart of the game is in researching, then successfully experimenting on, and finally being the player to publish on each discovery. The number of available discovery actions changes based on how many players are in the game. While publishing discoveries provides precious prestige, it also shares your knowledge of the discovery with other players, allowing them to advance up the discovery tree and compete with you on advanced discoveries. Timing what and when to publish is the key to winning.

### RESEARCH

Research is the first step toward publishing and earning prestige.

Each research action you take allows you to research a single discovery. Researching a discovery costs the number of research points indicated on the game board and your scientist mat. The energy you placed on the action counts as one point, some action spaces on the game board have modifiers, your scientist's bonuses, and any applicable happening cards. If you still do not have enough research points to meet the requirement you must spend rest to fulfill it. If you are unable to meet the requirement you lose your action.



Research

...nity enhanced the popular scientific publications.

KEEP

4+

In a 2 or 3 player game chemistry and biology are out of play. Ignore all chemistry requirements for advancing up the physics tree.

Placing your track markers: place one on the turn order track in the appropriate spot, one on the three spot on the rest track, four on the influence tracks with some starting at zero and one or more starting higher as indicated on your scientist mat, and one at the start of the prestige track.



Each player has 3 small energy markers

So, for example, if Galileo were to take a research action he would get 1 research point for the energy committed to the action and +2 from his scientist bonus. As such he could successfully research any discovery he is eligible for with a research requirement of 3 or less. If he still did not have enough research points to be successful he could elect to allocate one of his rest points, if he has any, to increase his total.

To research a discovery you must have knowledge of **all** pre-requisites, either through successful experimentation, or because any player published it. In each case this knowledge is indicated by discovery markers on the board. Pre-requisites for each discovery are identified by arrows on the game board and are also listed on the scientist mat. Remember you only need knowledge of one from grouped discoveries to meet the pre-requisite.

Place one of your discovery markers on the research area for that discovery to indicate you have successfully researched it. Remember that you can only research discoveries you are eligible for, and you may not research discoveries that have already been published.

### EXPERIMENT

Experimenting is the second step toward publishing and earning prestige, and how you gain the knowledge related to discoveries you've researched in order to move up the discovery tree.

When it is your turn to resolve an experiment action, announce which discovery you intend to experiment on. You begin with one experiment point, granted by the energy you spent on the action. This may be modified by the action itself, your scientist, or any relevant happenings. You may then increase this total by spending rest points. Then roll the die and add the result to your previous total. If the total is equal to or greater than the target experiment number (indicated on your scientist mat and on the board) for that discovery, you have succeeded. You have failed if the total is less than the target number, or if you roll a 1, which is always a failure!

There are two target experiment numbers for each discovery. If no other player has successfully experimented on that discovery you must equal or exceed the first number; if at least one other player has already successfully experimented then your target is the second number. You may not experiment on discoveries that have already been published.

If successful, move your discovery marker from the research area on the discovery to the experiment area. This indicates you have knowledge of the discovery. You may now publish this discovery or research discoveries higher up the discovery tree, assuming you have knowledge of any other pre-requisite discoveries as well.

### PUBLISH

Publishing is the primary way you earn the necessary prestige to win. In a 2 player game only one player may publish each turn. In a 3-4 player game, only two players have the privilege of publishing. In a 5 player game, three players may publish. This is the most limited action, reflecting the reality that only so many scientific treatises would capture attention during a particular time.

You may publish any discovery you already have knowledge of, indicated by your discovery marker on the experiment area for that discovery. You may not publish a discovery that already has a player's discovery marker in the publish area, as each discovery may only be published once.

To successfully publish a discovery you must meet all of the requirements as listed on the game board. Your total publish points must equal or exceed the requirement, indicated by the quill pen. The energy you spent on the action is one point, then modified by any bonuses on your scientist mat and/or applicable happening cards. If you still do not have enough research points to meet the requirements you must spend rest to fulfill it.

In addition, you must meet or exceed any influence requirements in the four areas - government, religion, enterprise and/or science - by being at or above the indicated number on the influence track.

When you successfully publish, you gain the prestige indicated by the pipe icon on the discovery. Update your score on the prestige track and move your discovery marker to the publish area, indicating that all players now have this knowledge. Return all other markers on this discovery to their owners.



Prestige

When you publish, move your discovery marker on any unpublished knowledge in the pre-requisite discoveries from the experiment area to the publish area and return all other markers to their owners. No one receives prestige for these discoveries.

## CLEANUP

Return any energy markers to each player and remove any remaining happenings from the action area. Then, reveal the new happening(s) for next turn - one card is drawn for a 2-3 player game, while two cards are revealed in a 4-5 player game - and begin the next turn!

## VICTORY

The game concludes at the end of the turn when the last level 5 discovery is published, or the turn following the happening card supply running out. The winner is the player with the most prestige. To determine final prestige:

- Add
- The total value of prestige each player earned during the game
  - +3 for the player(s) who published the most total discoveries
  - +2 for the player(s) with the highest value on each of the influence tracks (so, a player who has the most in all 4 could earn +8 prestige)

In case of ties all players receive the bonus. The player with the highest total wins. Ties are won by the player who published the most level 5 discoveries. If the game is still tied play best 3-out-of-5 rock-paper-scissors.

## CREDITS

This game would not have been possible without the input of a diverse group of people.

Design, Research & Development - Dirk Knemeyer

Development - William Abner, Michael W. Tan

Research & Additional Development - Troy Goodfellow

Art - Heiko Günther

Secret Weapon - Mary Abner

Playtesting & Input - Bill Turner, Casey Borders, Colin Kaesekamp, Dave Gerson, Donna Brooks, Frank Doebrich, Heiko Günther, John Lapham, Jon Shafer, Kay Fedewa, Mace Rosen, Mark Luta, Martin Gisch, Natasha Borders, Randall Bart, Sandra Gohrbandt, Sebastian Sohn, Silke Schmidt, Tobias Gohrbandt, Wolfgang Hoff



Experiment



Publish

## FAQ

### ABOUT THE NEW SCIENCE

*Is The New Science a worker placement game?*

Yes—with “energy” replacing the typical worker. You have three “workers” per turn.

*Is there ever a time when multiple players can use energy on the same action spot?*

No. Each spot is limited to one energy placement. Multiple players may perform the same action more than once on the same turn, but they must spend energy on separate action spots to do so.

### DISCOVERY ACTIONS & TREE

*If Galileo researched twice via using two research action spots, is his +2 bonus applied to both actions?*

Yes.

*What exactly does “Knowledge of” mean?*

That someone has either published the discovery for all to read or they have personally and successfully experimented on that discovery. In other words, to advance up the Discovery Tree, researching a pre-requisite isn’t enough. You need to have successfully experimented on it, or someone (including you) has already published it.

*Can I race up the tech tree without publishing?*

Technically, yes, a successful experiment is all you need to fulfill a pre-requisite. The only time the influence track pre-requisites come into play is for the publish action. However, if you race up a tree and publish you do not additionally score prestige for the lower level pre-requisite discoveries. And the player with the most prestige wins, so you will need to publish!

*Do I need to have successfully experimented on or published both Astrological Science and Laws of Attraction in order to research one of the level 2 astronomy techs?*

Yes, you must always have knowledge of all pre-requisites to advance up the discovery tree. They are indicated by the arrows on the game board and in text on your scientist mat.

*Do I need to have knowledge of both level 3 Mathematics discoveries in order to research Mathematics level 4?*

No. Either one of the two level 3 Mathematics discoveries will suffice. There are three different groups of multiple discoveries – level 2 Astronomy (Heliocentric Theory, Planetary Motion), level 3 Mathematics (Analytic Geometry, Probability Theory), and level 4 Physics (Pendulum Theory, Spectrum of Light, Elastic Force). You only need knowledge of one from each of these groups in order to meet the pre-requisite and advance up the track.

*What are the pros and cons of publishing?*

Publishing is the primary way to gain prestige, which is what is used to determine the winner of the game. So it is vital that you publish eventually. The downside is that once you publish your findings after a successful experiment action, every other scientist has access to it and may continue to research up the discovery tree. After all they, literally, read your book.

### REST

*Can you explain how rest works?*

Rest is an energy reserve. You use it to help you research, experiment, and publish when your energy and other bonuses are not enough to meet the requirements. You can use as much rest as you like to help you perform any of those actions, but you must declare your use of rest before you attempt an experiment roll. Also, once you use it the only way to get rest back is to spend energy on the rest action itself, which also affects turn order.

### INFLUENCE & PRESTIGE

*Why do I need to worry about influence tracks?*

The small end game bonus is nice. If you are top dog on any of the tracks at the end of the game you get two bonus points. But the real reason is to meet publishing pre-requisites, since a minimum level of influence is required in one or more of the four areas – government, religion, enterprise, science – to be able to publish most discoveries. Ignoring the influence tracks is a surefire way to lose. It’s not a sexy action to take, but a vital one to be successful.

*How else can I earn prestige?*

Publishing, obviously, and earning an end game bonus for scoring high on the influence tracks. As another end game bonus, the player(s) who published the most total discoveries receives 3 bonus prestige.

### HAPPENING CARDS

*Are effect happening cards only in effect on the turn they are drawn?*

Yes, they are then removed during the clean-up phase.

*Can I keep “play” happening cards and use them later?*

No, they must be played immediately upon being activated in the action resolution phase. Only “keep” happening cards may be saved for later or ongoing use, and you may only hold one of those at a time.

*Can I spend energy on two happenings the same turn?*

Yes but if they are both keeps you may only keep one of them. In fact you can choose two or more of any of the available actions except rest – so long as there is an action spot open.

### SCIENTISTS

*What is the big grid with lots of numbers on my scientist mat?*

This is a quick reference sheet that shows you the benefits of all five scientists and duplicates all of the requirements information from the game board. This enables you to more easily plan your path to victory.

*When using a bonus from a scientist mat or a happening card, does each action require energy regardless of the bonus?*

Yes. There are no “free” actions, regardless of bonuses. You have to place your energy to actually choose it.

*Can Galileo research two different level 1 discoveries due to his +2 research bonus?*

No. In order to research multiple discoveries you need to spend energy on multiple research actions. The same is true for each bonus and action.