

The Disease Detectives

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Board Game



www.disease-detectives.org

„We just got a call with another outbreak, presumably food borne. Our team is already dispatched gathering information and sending samples to the lab. Media is alarmed, people are panicking and the mayor kindly set a date for the press conference. Oh, and some lunatics blame supernatural powers for this string of outbreaks.“

Hello and welcome to the Disease Detectives boardgame.

You and up to three other players race against time to contain menacing disease outbreaks that threaten your neighbourhood. Your three detectives Lucy, Michael and Thomas must find the source of infections before the press conference begins by relying on their epidemiology skills, environmental investigations and microbiology laboratories! Gain experience through research and learn to master ancient EpiPowers.

But beware of the Curse of the Black Pump Handle! What's more some folks reported a ghost drifting through Broad Street...

Game background:

Infectious disease epidemiologists frequently investigate outbreaks, most of them food borne. Finding the source of food borne outbreaks requires a combination of epidemiological skills looking at the pattern of food consumption and disease, careful environmental investigations tracing and checking the food production chain and, of course, taking samples and looking for bugs and toxins in a laboratory. Outbreak investigation teams consist of scientists trained in statistics, data processing, microbiology but also communication. Above all, a healthy mix of curiosity and improvisation is needed!

The gaming board depicts Broad Street, London (UK) where John Snow famously stopped the 1854 Cholera epidemic by removing the iron pump handle on one of the public water pumps. After careful analysis of the geographical distribution of disease he concluded that water from a specific supplier was carrying the disease (modern germ theory was widely unknown at the time). The location of the pump is given on the gaming board and marks the starting point of “The Curse of the Evil Pump Handle”.

Brief description of the game mechanics:

Players investigate foodborne outbreaks with their three disease detectives Lucy, Michael and Thomas. Disease detectives are moved to the research units (1) “Local Health Department” for epidemiological research, (2) “Environmental Investigation Office” for environmental investigations and (3) “Laboratory” for getting test results on the infectious agents involved.

Before drawing research cards there, players have to roll two dice and reach a difficulty threshold. Players can improve their die roll by “investing” research actions. Event cards, knowledge cards and two random elements, “The Curse of the Evil Pump Handle” and “The Spirit of John Snow” slightly shift the game balance. The game ends when the turn marker reaches the field “press conference”. The player with most victory points wins which mainly depends on successful research.

contents:

1 board

4 team score sheets

12 detective tokens: three blue, three red, three green, three yellow

48 research token: 12 blue, 12 red, 12 green, 12 yellow (these might be replaced by coloured dice)

1 pump handle token

1 spirit of John Snow token

1 turn marker

2 dice, one black, one white

72 event cards

27 knowledge cards

36 research cards: 12 blue (lab research), 12 yellow (environmental investigation), 12 green (epidemiological research)

Setup:

1. Each player picks a colour and gets:

–one score sheet

–three detective tokens of that colour („detectives“)

–12 research tokens of that colour (or coloured dice)

2. Shuffle event cards, knowledge cards and research cards.

Keep the coloured research cards separate. You may choose to play without knowledge cards.

3. Put the turn marker on the leftmost field of the turn track. Put the pump handle token and the Spirit of John Snow token on the black field.

4. Players put all three detective tokens on their coloured headquarter field (HQ). The tokens have two different sides: a picture with a face of either Lucy,

Spirit to the Rescue!

In a previous turn, the red player moved “The Curse” on one of blue player's active detectives in front of the local health department. It's the blue players turn now and “The Spirit” is only two fields away from his detective. Blue player rolls “two” for the movement of “The Spirit” and promptly moves it onto his detective, thereby negating “The Curse's” effect. Had he rolled any other number for “The Spirit” movement, “The Curse” would have hit his detective which had then missed a turn.

Thomas and Michael („active“ side) and the same picture with a red cross on it („miss turn“ side). The side with the cross marks a detective who misses a turn for whatever reason. Detective tokens start with their „active“ side face up.

5. The player with the most recent gastroenteritis starts, the game continues clockwise.

Turn sequence

1. Draw event card. You can either keep the card or have to resolve it immediately. Card rules precede general rules. Card effects that are active for one turn last until the beginning of the next turn of the player who drew the card.
2. Move "The Spirit of John Snow": roll the white die and move "The Spirit" that many fields in any direction. Movement stops in front of research units, players' HQs or the town hall, i.e. "The Spirit" may not enter these fields. A detective sharing the field with "The Spirit" at the beginning of that detective's movement gains one additional movement point.
3. "The Curse of the Black Pump Handle": if one of your detectives shares the field with "The Curse" **at the start of your turn** that detective has a serious bout of diarrhoea and misses a turn (flip token to "miss turn side"). "The Spirit" protects from "The Curse", so ignore "The Curse" if the detective also shares the field with "The Spirit". Detectives already missing their current turn also ignore "The Curse". Whether or not your detectives were affected by "The Curse", roll the black die and move "The Curse" that many fields in any direction. Movement stops in front of research units, players' HQs or the town hall, i.e. "The Curse" may not enter these fields. You may move "The Curse" on another player's detectives (that is actually the whole point of moving "The Curse"...))
4. Movement: you do **not** roll die for moving your detective tokens. Instead, move each of your detectives for up to 6 fields each, unless they have to miss a turn (detective token on "miss turn" side at start of this turn). You may skip movement of one or more of your detectives (e.g. for avoiding "The Curse" or doing a research action, see below).
5. Optional: if one or more of your detectives end their turn on a purple "knowledge" field, your left neighbour draws a knowledge card and reads you the question on the card. You can only answer one knowledge card per turn, no matter how many detectives land on a "knowledge" field. If you successfully answered the question, keep the knowledge card. Two knowledge cards can be

traded in for one reroll of one die. The result of the second roll replaces that of the first.

6. If one or more of your detectives are on a "Research Unit" field that detective may do a **research action**: the detective misses one turn (flip detective token to "miss turn" face) and you put one research counter of your colour on the research unit field to keep track of your research investment. Put one counter for each detective doing a research action. More than one detective may be in the same research unit. The idea is to invest time in order to lower the dice roll needed for successful research (see 8.). You might find coloured die better than tokens for keeping track.

7. Flip all of your detective tokens that **began** this turn on their "miss turn" face to their "active" face. Tokens flipped to "miss turn" in the current turn remain untouched (they, well, miss their turn...). Repeat step 6 if you want.

8. If one or more of your detectives are on a "Research Unit" field with their "active" side face up you may take a **research roll**: roll two dice and apply bonuses and rerolls. Add one for each of your research tokens in that research unit. After modification, your result has to be at least as high as the complexity level on the particular "Research Unit" on your disease detective score card (the number on the blue, yellow or green fields named "A" or "B"). You start with slot-A and continue with slot-B. The idea is that you get preliminary data quickly (slot-A) but need to invest more time for more detailed information (slot-B). After your **research roll**, remove all of your research counters and move your detective to his HQ whether that roll was successful or not. If successful, draw a research card of that research unit's type and put it on your score card. You must first fill the "A"-slot before putting a card on the "B"-slot. You may take a **research roll** even if the detective has just moved to the "Research Unit" this turn, provided the detective token is on its "active" side.

9. If this is the turn of the last player advance the "Press conference" counter by one.

Example player turn

Step 1: Blue player draws "power outage", preventing lab action until the beginning of his next turn.

Step 2,3: see previous box "Spirit to the Rescue!".

Step 4: Detective One (that just got saved from "The Curse") was standing in front of the "Local Health Department" and now spends one of his six movement points to move it onto the department field. Detective Two uses all six movement points to move towards the "Laboratory". Detective Three is on the "Environmental Investigation Office"-field with his token on "miss turn" and thus cannot move.

Step 6: Blue player announces a research action with detective One. The detective token gets flipped over to its "miss turn" side and blue player puts one of his blue research tokens onto the "Local Health Department"-field on the board.

Step 7: Detective Three did a research action the previous turn, hence his token was set on "miss turn". It is now flipped on its "active" side. Blue player does not want to take another research action with detective Three.

Step 8: Detective Three tries his luck with a research roll. He doesn't have any environmental investigation cards yet (empty A-slot on player sheet) so his research difficulty level is "seven". Rolling two dice yields "six", which would normally miss. However, adding the one research token earned during the previous turn makes his losing "six" a winning "seven". Blue player draws one yellow environmental investigation research card and puts it on the yellow A-slot of his player sheet. His next environmental research action would have a complexity threshold of "nine" (Slot-B). He also removes all his tokens from the "Environmental Investigation Office" research unit and moves detective Three to his HQ (no movement costs incurred).

Step 9: Blue player was the last player and therefore advances the press conference counter at the bottom of the board.

Optional: Outbreak clusters

Quite often one source causes multiple outbreaks. Thanks to food traceback and pathogen finetyping seemingly unconnected outbreaks can be joined into an outbreak cluster. In the game, occasionally you draw outbreak cluster tokens that will be put on either a players sheet or the board. Draw the token randomly. The tokens become important for calculating victory points. If you choose to play without outbreaks, just ignore the text on the cards.

Optional: Knowledge fields

Knowledge fields test your infectious disease epidemiology. If one or more of your detectives end their turn on a blue "knowledge" field, your left neighbour draws a knowledge card and reads you the question on the card. You can only answer one knowledge card per turn, no matter how many detectives land on a "knowledge" field. If you successfully answered the question, keep the

knowledge card. Two knowledge cards can be traded in for one reroll of one die. The result of the second roll replaces that of the first.

And the winner is...

The player with most victory points wins. You get one victory point for:

- having at least one of your detectives in the town hall field at the press conference (personal presence at important meetings!). It is max. one point, not one point per detective.
- one victory point for each research card
- one victory point if all your A-slots have a research card
- one victory point if all your B-slots have a research card (so a full A- and B-slot yield 2 Vps)
- optional: one victory point if at least one of your cluster tokens shares the same colour with another cluster token

Victory!

Red player had two A-slots filled and one B-slot, yielding 3 VPs. One of her detectives made it to the press conference, bagging another VP. She also had one purple cluster token like the yellow player and gets another VP. Her total is five VPs.

Yellow player had all A-slots filled and one B-slot, yielding 4 VPs plus one for a complete A-slot (5 VPs). His detectives were hit by “The Curse” and didn't make it to the press conference in time (bo-hoo!). Since he shares one outbreak cluster token with red player, yellow player scores a total of six VPs.

Blue player managed to fill all his A-slots and B-slots and thus scored 6 VPs plus one for a complete A-slot and one for a complete B-slot. His detectives were researching all the time and completely forgot about the press conference. Still, with eight victory points, blue player wins the game.